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ECONOMIC AND INDUSTRIAL AFFAIRS

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INTERNATIONAL AFFAIRS

GDR-USSR COOPERATION IN POWER PLANT OPERATION CITED

East Berlin HORIZONT in German Vol 13 No 50, 1980 signed to press 8 Dec 80 p 22

[Report from Moscow by Dieter Wende: "GDR/USSR: Five-Year Plan of the Five-hundreds"]

[Text] "We have met our five-year plan obligation to the GDR, and if you wish you may call this half-decade the five-year plan of the 500-megawatt blocks. That is a new step in the GDR's energy economy!" Vladlen Maltsev's voice reveals the satisfaction with which he comes to that conclusion. He enumerates: "There are the first two Soviet 500-megawatt turbines in Hagenwerder. Two more are in operation in Boxberg, which German-Soviet cooperation has turned into one of the largest heat-engine generating stations in Europe. The fifth 500-megawatt block, in Jaenschwalde, will go into trial operation prior to the 10th SED Congress. All these blocks come out of close cooperation: the GDR makes the boiler plants (steam generators), and the turbo plants come from the USSR. Our cooperation has raised the GDR's energy potential by over 7,000 megawatts in the last 10 years. That is more than one-third of the country's power plant capacity. And the 500-megawatt blocks are the chainlink connecting GDR energy production with world standards."

In 5 Years 5,000 Megawatts

At the USSR Ministry of Power & Electrification in Moscow, in a virtually empty conference room, I am facing two men familiar with the development of our energy economy. Vladlen Maltsev is the competent secretary of the working team of the parity government commission for scientific-technical cooperation between the GDR and the Soviet Union in the energy sector.

Andrei Savonov, the chief engineer of the main administration for international relations, adds the following remarks: "Thus far we were only talking of the traditional heat-engine generating stations. The 7,000-megawatt increase, however, also includes the reactor blocks for nuclear power plants we have delivered to the GDR: one 70-megawatt reactor for Rheinsberg and four reactors, 440-megawatt each, for the Bruno Leuschner nuclear power plant (Editor: where more than 10 percent of our country's energy output is being produced in 1980). While from 1971 to 1975, nuclear energy held a 17-percent share in the overall power plant capacity increase, the share rose to 25 percent in the current five-year plan."

That is a balance-sheet on our cooperation in energy that does itself proud, because of the 7,000 megawatts of years past almost 5,000 were created within the last five-year plan. This "lifeblood of the economy" was the basic precondition for our course toward industrial intensification and rationalization, industrialized production in agriculture, and equipping 6.5 million households with modern devices. That objective called for a more intensive utilization of existing power plant capacities and, above and beyond that, for expanding our energy base through cooperation with the USSR.

To understand the dimensions of our five-year plan, let us take a look at the history of the GDR's energy economy, at 1945, when the generation of those who today are in their mid-50's began to learn power plant construction. Then the steam turbines of Kalbe and Trattendorf produced 12.5 and 25 megawatts. At the Elbe power plant and in Hirschfelde it came to 32 and 50 megawatts in the mid-50's. In Luebbenau we already came to 100 megawatts in 1961.

In 1964, the first government agreement was signed with the USSR on cooperation in energy. That first agreement envisaged 210-megawatt blocks, a figure which in itself suggests the new quality envisioned. The first one, in Thierbach, went into operation in 1970, and today 16 like it are in operation in the GDR.

Almost in parallel with this development a new step however was already initiated: the transition to 500-megawatt blocks. Hagenwerder 3 can boast of having put the first plant of this capacity into operation in 1976. There are four like it today, and soon there will be five. "Of course we are proud of this development in the GDR energy economy," Vladlen Maltsev says, "but the point I want to make is this: It's continuing. Boxberg is large, but Jaenschwalde is becoming larger!"

Rational and Economical

"We have a good partner, good friends, in the GDR," Andrei Savonov adds. "We quarrel often but of course never senselessly, always over the question of how to do better. How can we improve the equipment, improve plant safety, or use the plants at maximum capacity. We are already applying many GDR experiences. GDR specialists have had an influence on developing new pumps for the 500-megawatt blocks, which now are being built in our country through science production affiliation. GDR specialists under Dr Krapf solved a number of technological problems at the Leningrad metallurgical plant, which led to optimum operations in the 500-megawatt blocks. We are making use of the GDR invention of sliding shell construction in building smokestacks of which Moscow has already seven, and of cooling towers, and it is also used in Ekibastus."

"For this and the next five-year plan we have already developed a broad cooperation program," Vladlen Maltsev adds. "This involves, among other things, the productivity of repair services. Scientific-technical cooperation between the partner enterprises of both countries is to be further developed in all fields, mainly in the saving of raw materials and fuels and the full capacity use of plants. The rational use of electrical energy is gaining increasing importance, and there we can learn a lot from the GDR."

Genuine Partnership

In the last three sessions of the working team still another trend in our work became more evident and important. When 500-megawatt blocks or still larger plants are turned off, the performance reduction incurred is much larger than in the case of a 210-megawatt turbine. The GDR is a member of the "Peace" energy network that combines a 150,000-megawatt power plant capacity. It makes possible the supplying of extra power in peak periods extending from east to west from power plants that are not under a full load right then without having to create additional capacities. Therefore, the most important integration measure of recent years has been the joint construction of the 750-kilovolt pipeline from Vinnitsa (Ukraine) to Albertirsa (Hungary). Not until it was completed could a secure parallel operation of the networks in the member countries be insured.

"And while we are talking of drawing up a balance-sheet between two party congresses," so my partner in our conversation says, "then there is another thing that goes with it: hundreds of workers, master workmen and scientists have come to know, understand and respect each other. Relations have long gone beyond the merely technical and scientific. There are genuine partnerships between Thierbach and the Moldavian thermopower plant, between Boxberg and Voroshilovgrad, and between the nuclear power plants of Nord and Novovoronezh. Now contacts are being organized on the trade union level. The first repair brigades are being exchanged between the partners. They do concrete work in partnership operations and can thus bring concrete experiences into the debate."

Now our conversation actually could end and I could take my leave. But there was one statement made that still keeps me at it: Boxberg is large, but Jaenschwalde is becoming larger. Can one find out something about the long-range prospects?

"Of course, at the 16th session of the working team in energy, on 14 September, in Berlin, we nailed down the five-year plan up to 1985 and staked out the targets up to 1990," Vladlen Maltsev says. "The centerpiece of our cooperation in years to come will be the construction of the largest GDR soft coal power plant in Jaenschwalde and the further extension of the Bruno Leuschner nuclear power plant." At this point another brief retrospective remark may be in order: the first nuclear power plant we built, with Soviet aid, in 1966 had a 70-megawatt capacity. The Bruno Leuschner nuclear power plant increased that to 440-megawatt blocks. In the foreseeable future we will get capacities in the "million" range.

5885

CSO: 2300

EXPANSION OF DATA PROCESSING SYSTEMS FOR ECONOMY

Tirana RRUGA E PARTISE in Albanian Sep 80 pp 18-27

[Article by Selman Bilaca: "Centralization and Mechanized Processing of Data and Information--An Important Means for the Scientific Management of the Economy" passages between slant lines printed in boldface]

[Text] The Eighth Plenum of the Party Central Committee assigned very important tasks, such as, the necessity of strengthening and perfecting the scientific management of our socialist economy and the improvement of the effectiveness of socialist production--tasks which cannot be achieved without statistical data, observations and expanded scientific studies and analyses. "In this framework," Comrade Enver stressed, "the issue of the perfection of information, in its wide understanding, so that it will become as understandable and as effective as possible, is today a problem which requires the best solution possible."

Despite the measures adopted and periodical improvements that have been carried out in the processing of economic and financial data and information, there still is a certain backwardness in this field. The sources, means and ways of processing this information do not respond properly to the increasing requirements assigned by the economic management of the economy. And, as it is known, information with shortcomings, shallow information and delayed information greatly loses its value in the field of the concrete management of production and can result in dealing with "generalities" and route.

For perfecting and putting the processing of economic and financial information on healthy scientific bases, an important role is played by the centralization and mechanized processing of data and economic information, organized in special centers for this purpose, which have been established in Tirana and in seven districts of the country.

The process of centralization and mechanization of economic data is an objective necessity conditioned by the fact that the continuous development and invigoration of the economy is accompanied by the multiplication and inter-connection of relationships, both in every economic and producing link and between them. These objective factors of economic development inevitably influence the continuing increase of the volume of accounting activities and the increasing demands for processing these data and for converting them into the most rapid, complete and continuing economic and financial information.

As a result of the measures taken for the gradual overcoming of difficulties of growth and for implementing the directives of the Seventh Congress of the Albanian Workers Party and of the recent plenums of the Party Central Committee and Comrade Enver Hoxha's recommendations for increasing the role and influence of finances in the process of the management of the economy, the centers for the mechanization of economic and financial data have made important steps and are carrying out efforts to improve their role and influence in the implementation of the political and economic policy of the party.

/The application of scientific methods and in the reflection of economic phenomena/

The study, execution and perfection of scientific methods and systems of recordkeeping and the correct reflection of economic processes and phenomena constitute the starting point of the work of the centers for the centralization and mechanization of economic data in order to provide many-sided economic and financial information, as early as possible and with great accuracy. And, we must admit that the results achieved so far are good. The scientific and precise methods, which are applied in accordance with the characteristics of the organization and management of enterprises, different branches of the economy and agricultural cooperatives guarantee the reflection of economic processes and phenomena, of the financial situation and of the results of economic and financial activities with a satisfactory accuracy, not only in totality for the economic enterprise, or agricultural cooperative, but also for certain products, activities and sectors. Also, the centralized recordkeeping has brought about the unification of data and information of the enterprises which operate within the same economic branch and the strict implementation of all methodological requirements.

The level of centralization in the field of recordkeeping has continually progressed. The Center for Mechanization of Economic Data in Tirana alone comprises all the enterprises of light industry and the food industry, foreign trade and the communal system, the agricultural cooperatives and some enterprises of heavy industry, which constitute about 50 percent of the total number of economic enterprises and agricultural cooperatives of the district. Compared to 1970, today the center meets a work volume of about 20 times greater; while, the number of economic units covered by it has been increased four times. Among other things, this centralization and mechanization have greatly helped the economic enterprise and agricultural cooperatives with the voluminous accounting work which has been continually increased.

Experience proves that at the time of the transfer of recordkeeping from the economic enterprises and agricultural cooperatives to the centers for the mechanization of economic data there come to light serious shortcomings and gaps, heterogeneous methods and systems and simplifications incompatible with methodological criteria carried out by this or that accounting sector. Thus, for example, before centralization, the accounting section of the foreign trade enterprises had the most varied shortcomings and gaps, both in regard to its foreign activity and, especially, in regard to its domestic activity. The way it had been organized did not guarantee the complete recording of the economic processes and phenomena which were occurring in these enterprises. Similarly, many economic enterprises and agricultural cooperatives, which keep their own records under the pretext of "simplifying" their accounting work, have simply given up recording, in quantity and in value, any kind of raw material, ready made product and other material assets, finding the "shortest" way to reflect them as a whole, in a single value. Such an action weakens control over the administration of property and paves the way for its abuse.

The complete elimination of these serious shortcomings through the transfer of recordkeeping to the centers for the mechanization of economic data is not an easy task; it is a task of responsibility. In these cases, the centers give skilled assistance to the financial apparatuses of economic enterprises and agricultural cooperatives both in the field of methodology and in the practical organization of work.

The requirements for the scientific and effective management of the economy assign, as an objective necessity, along with the perfection of planning methods, the further perfection of the data and information system. This is of special importance for the indicators of production costs. For this purpose, the centers for the mechanization of economic data have studied and scheduled, and are applying, a number of measures for the exact and complete recording of these indicators for every unit and every activity. Along with this, the manifestations of formalism seen in this field are being fought. There are certain enterprises which present demands for keeping the necessary records only for the factual showing of expenditures, without taking preliminary measures to draw up the cost plan for each unit and without organizing the work for drafting the necessary documentation, which are the top requirements for achieving the established aims. These and other issues require a more extensive work and a better cooperation and coordination of work between the centers for the mechanization of economic data, the economic enterprises, the agricultural cooperatives, the sections of the executive committees of the people's councils in the districts and the responsible central departments.

/The assurance of a complex and continuing information system /

Attention has been devoted to the perfection of the processing work for obtaining the most complete, exact, rapid and continuing economic and financial information, as the main direction of the activity of the centers for the mechanization of economic data; and, in general, results have been achieved.

On the basis of the recommendations of the Council of Ministers that the state and economic organs, along with the plan indicators, must also analyze their financial indicators, the centers for the mechanization of economic data since 1976 have been producing and giving, to the economic enterprises and agricultural cooperatives, an important number of economic and financial indicators every month as early as possible. These indicators characterize the various aspects of the economic activity of the enterprises and cooperatives, such as, the production and distribution of products, production costs analyzed for every activity and crop, expenditures for circulation or services, profitability, relationships with the budget, the situation of circulating assets and the financial results and so forth. The 3-month and annual accounting balance-sheets or the reports from the agricultural cooperatives are also processed more completely, more accurately and more quickly.

However, processing and obtaining good quality economic and financial information in a short time depends directly on the delivery to the mechanization centers by the stipulated time and with good quality, of documents supplied by economic enterprises and agricultural cooperatives. Despite the results achieved, from time to time, this remains a disturbing problem for the mechanization centers, because, a number of enterprises and cooperatives do not respect the stipulated schedule for the delivery of documents. This occurs because the organization of work for the preparation and regular circulation of documents is left to spontaneity and because some leadership cadres in enterprises and cooperatives do not understand this issue as a key problem directly linked with the administration of property, with the discipline

for the preparation of bills, banking and payments and with the knowledge of the progress of production, distribution, supplying and of the financial situation and so forth up to the exact and timely extraction of the economic and financial information, as a necessary means of control and management.

The requirements set forth today for the scientific and effective management of the economy in the field of preparing and using economic information are great. On the basis of the results achieved, we must make rapid steps forward so that the economic and financial data and information will effectively plan their role as means of management and control. Therefore, it is necessary that, along with the 10-day operational data, the economic enterprises and agricultural cooperatives better utilize the monthly accounting data prepared by the centers for the mechanization of economic data. These data are an effective means for knowing in time the conditions of costs and of expenditures, of material reserves of production, of economic results and of the financial situation and so forth.

We stress this fact, because, practice shows that there also are certain directors of economic enterprises, agricultural cooperatives or of finance and planning branches who hardly utilize the monthly and 3-month economic and financial data to make expanded analyses and studies, for a scientific management of production. And, this occurs at a time when, as a result of centralization and mechanization of accounting data, the workers of the finance branches of enterprises and cooperatives are being relieved of the recordkeeping work which used to take 70-80 percent of their work time, a fact which has given them time and practical opportunities to deal with skilled organizational and managerial work and with expanded analyses and studies for improving the effectiveness of production. This is why the utilization of the opportunities created requires the perfection of the work method and style of the appropriate workers of economic enterprises and agricultural cooperatives, so that they will deal better with the basic problems of economic and financial management; otherwise, the process of centralization and mechanization of accounting activities and the advantages that it creates will not give the necessary results.

In the framework of the implementation of Comrade Enver Hoxha's recommendations, the working collectives of the centers for the mechanization of economic data, led by the basic party organizations, are involved in research work for perfecting information. The Center for the Mechanization of Economic Data in Tirana, for example, along with the monthly data that it gives to enterprises and agricultural cooperatives, since June of this year, through a further and more expanded processing of economic and financial indicators, has been preparing "summarized periodical bulletins," for the enterprises of the various branches of the economy, and sending them to the leadership organs of the party and government in districts and departments. The drafting of these bulletins has been done in such a way that it provides an opportunity to know not only the level of the fulfillment of the plan tasks, but also the tendencies of the economic and financial indicators and their dynamics in comparison with former periods. In the future, these data will be further perfected, and it will be possible to process them not only for the enterprises and cooperatives which have centralized their data in the centers for the mechanization of economic data, but also for all other enterprises at the district level.

Important tasks are assigned to the centers for the mechanization of economic data in regard to the mechanized processing of data and of other statistical data. Good progress has also been made in this field. Thus, at the Center for the Mechanization of Economic Data in Tirana in 1979, compared to 1973, the volume of work was increased

50 times and 19 of the most important and most voluminous statistical data titles were handled, such as: demographic cards, according to districts, for the entire republic; the utilization of work time and work norms; the average number of workers; the wage fund; the sale of goods for all the systems; the instances of disease in dispensaries at the republic level; the annual reports of the agricultural cooperatives and enterprises at the republic level and so forth. Nevertheless, the tasks are numerous in this field; and it is necessary that, in cooperation with the responsible organs at the base and in the center, the ways must be found to overcome a number of difficulties that have emerged in this field.

The Eighth Plenum of the Party Central Committee stressed that "it is essential for the state planning and finance organs and for our economic sciences to find more scientific forms and methods, from the center to the base, for planning, recording, following up and systematically monitoring every expenditure which is made in production and circulation, whether material expenditure or work payment" (RRUGA E PARTISE", No 7, 1980, p 45). On the basis of these recommendations, in centers for the mechanization of economic data, as everywhere else, the programs of research and scientific work are being reviewed and important study themes are being planned for solving a number of problems which influence the scientific management of the economy.

So far, the activity of these centers has been concentrated mainly in the field of processing of accounting and statistical data and in the preparation of economic and financial information on the execution of plans. This also remains a very important field for the future and is expected to be intensified and expanded. However, as a result of studies and experiments done, it appears that possibilities exist for the mechanization, with satisfactory effectiveness, of a number of other operations, such as, the processing of the bills of various enterprises, travel vouchers for city transportation, by means of much data is provided, such as the work norms of drivers, the consumption of fuel and tires and so forth and the accounting of work days, norms and wages in agricultural cooperatives and economic enterprises and the mechanization of technical records of construction enterprises and so forth.

However, a very important field of activity for the centers for the mechanization of economic data is that of planning, where the accounting technology can and must influence the improvement of the scientific level of this basic process of the management of the economy. Present practice of many enterprises shows that some essential documents, which characterize the complex of the practical execution of methods and of methodology of planning and those of monitoring and following up the fulfillment of plans are drafted with shortcomings and with defects and delays; or, there are cases when they are not drafted at all, because, they require a great amount of accounting time.

The party has recommended, for example, that the management and effective development of production require that "deep plowing" be carried out in the costs, both in the field of planning and in the field of its monitoring. Besides the work being carried out by the enterprises to plan the costs for each production unit, a special importance is given to accounting and drafting of the estimates of production expenditures for every unit, plant and every stage of technical process and up to the level of the enterprise so that every link will know what expenditures it will need for fulfilling the production plan and will base the plan for the reduction of costs on scientific calculations.

The struggle against global fulfillment in the planning of production, construction and so forth and its documentation on the basis of the technical and material base are directly linked with the execution of the balance-sheet method, as a scientific method for harmonizing the various aspects of the plan. This requires that the industrial production at the level of the enterprise and branch be planned, after having been examined according to types and assortments and, precisely, on this basis, complete and exact and even detailed calculations can be made for raw materials and other materials, relying on the norms for the utilization of all types of raw materials, main and auxiliary materials, fuel and so forth.

In cooperation with the finance directorate of the Ministry of Construction and with the "21 December" construction enterprise, the Center for the Mechanization of Economic Data in Tirana, along with the possibilities for the mechanization of technical records and so forth, has also studied the problem of the examination of estimates for the construction of projects at the national level for every district and every enterprise, not only to determine the construction costs according to kinds, but also, basing itself on the manuals for making estimates, to be able to calculate accurately the work volume and the needs for all kinds of construction materials. In this way, it would be possible to assure the scientific accounting and the coordination of the production plan for the construction material industry and the needs for manpower, machinery and so forth.

The best solution on a timely basis and of good quality is also required, through the mechanization of accounting activities, for important problems of the economy, such as, the processing of the balance-sheet system of the people's economy; records on the situation of raw materials and other materials at the user enterprise at the end of the year, in order to know and handle them properly and on schedule; the processing of voluminous statistical data and of various investigations of a study nature by the statistical directorate of the State Planning Commission, by the central ministries and of the executive committees of the district people's councils.

These problems and many others, that all branches of the economy have, will be solved gradually by the centers for the mechanization of economic data, along with the satisfaction of some of their needs for accounting technology, and this problem too will be solved as a result of the measures that are being taken.

/Not only recording work, but also study, analyzing and monitoring work/

Because of the fact that all basic documentation of enterprises and cooperatives passes through the hands of the centers for the mechanization of economic data, where their activities have been centralized, practical opportunities are created to exercise control over this documentation during the recording periods, in order to see by means of this control, the level of implementation of the law in the field of administration of socialist property and the different aspects of financial discipline and so forth.

In these last 3-4 years, data mechanization centers are expanding more and more in the performance of this function. For example, at the Center for the Mechanization of Economic Data in Tirana, forms and methods have been studied and set for exercising the functions of control over each recording phase and operation. As a result, the control exercised here is now extended not only to the legal aspect and accuracy of preparation and of calculations in documents, but also directly to the activity of workers with material responsibility for all the movements of goods carried out in

warehouses and in every article, for the respect of financial discipline and correct execution of powers in the field of administration of property, for the use of funds and financial means according to destination for the accuracy of data presented by the enterprises for the extraction of financial results, for the accuracy of the closing of annual records of agricultural cooperatives and for the exact determining of the elements which influence the value of the work day and so forth. Thus, according to the case, the Center for the mechanization of Economic Data in Tirana has become a barricade against irregular activities. By stopping these irregularities and by requesting explanations and additional information from the responsible enterprises or cooperatives, the workers of this center ask the directors of these enterprises or cooperatives to take measures so as to improve the situation; while, for the more important issues, they inform even the higher organs. For example, by examining the irregular documentation of the sectors of the communal housing enterprise in Tirana, shortcomings were discovered in the work of their organization; these shortcomings had become the cause for acts of violation of the laws and of discipline in regard to administration and property. This action served to draw conclusions and to take some measures for improving the situation in this enterprise.

The execution of monitoring functions by centers for the mechanization of economic data facilitates the work of the organs of the financial control-review organs which, by not dealing with the simple work of monitoring documentation, can devote more time and more attention to the more essential issues dealing with the control over the correct use of monetary and material values in harmony with socialist law, with control over the correct use of the wage fund in harmony with the quality and quantity of the work done and with control over production costs and the effectiveness of expenditures and so forth. It is understandable that for the proper execution of this delicate task, there still remains much to be done by the workers of the centers for the mechanization of economic data in order to assimilate the method of monitoring, to thoroughly know the legal aspect and, in general, to improve the level of their training.

"The task of our economists, planners and finance workers in the center and at the base," it was stressed at the Eighth Plenum of the Central Committee of the Albanian Workers Party, "is, guided by the party line and relying on the objective laws..., to take into consideration the fact that their role is not to record and establish facts and carry out a routine work, but to undertake studies, make generalizations and establish the ways to eliminate shortcomings and to prevent undesirable phenomena" (RRUGA E PARTISE, N. 7, 1980, p 46). Therefore, expansion of study work and analyses and drawing of conclusions and generalizations from figures and data processed for the various problems concerning the execution of the economic and financial policy of the party, are essential and should occupy the main place in the activity of the workers of the centers for the mechanization of economic data.

Guided by two recommendations and guidelines of the party, lately, the workers of these centers have begun to carry out varied studies and analyses of an economic and financial character. Thus, at the Center for the Mechanization of Economic Data in Tirana, in 1979, compared to 1977, when the first steps were undertaken in this field, the number of problems studied at the center not only quintupled, but also, above all, their qualitative aspect was improved, and efforts are being made to handle a number of important problems concerning the implementation of the economic and financial policy of the party. Among these problems, there are: the studies and analyses on the implementation of the party line in the field of foreign trade, and these on the execution of the tasks set for the expansion of work with norms and its

technical norming, on the application of the progressive average in planning accumulation, on the results achieved in implementing the guidelines of the party and the Council of Ministers on the increase of work animals, on the production of flour and bread in agricultural cooperatives, and on the effectiveness of the use of basic and circulating funds in industry.

In general, the studies and analyses carried out and the proposals presented for solution have been evaluated and supported by the district party and government organs and by the responsible central organs. Thus, for example, the conclusions and data from the study "on the problems emerging from the general registration of the population in 1979" for Tirana District served as a basis for the drafting of the Seventh Five-Year Plan in regard to some problems, such as, the determining of requirements on the basis of the structure of the population of cities and villages and according to age groups, the problems of education and health, the situation of the active population and the prospect for fulfilling the needs for manpower and the placement in work of all young active forces.

However, the centers for the mechanization of economic data must respond much better than hitherto to the great opportunities that exist in this field. All workers, especially the higher cadres of these centers, must be involved in research and analytical work. Along with increased efforts for their training and the other organizational measures, a greater work must be carried out in this field for the cooperation and coordination of work between the workers of these centers and the workers and specialists of the various economic enterprises and agricultural cooperatives on the problems that concern them.

/The perfection of organization and management—a decisive factor for fulfilling the tasks/

The successful implementation of the tasks assigned by the party to the centers for the mechanization of economic data requires the perfection of the domestic organization of their work, the knowledge, utilization and preservation of the technology of accounting, and the improvement of production, of quality and of the work effectiveness of workers of this sector.

The perfection of the organization and management of work in the centers for the mechanization of economic data, as completely new organisms, has brought into the open some problems for whose solution work is being carried out. Thus, special attention is being devoted to the internal organization of work in harmony with the requirements of the centralized work with machines by proceeding to specialized collective work, according to phases and operations, on the basis of the principle of the chain in the execution of the work processes of recording and of perfection of control. This is noticeably influencing both the increase of productivity and improvement of work quality and a more correct utilization of cadres, placing them in work processes according to the level of their technical and vocational training.

Guided by the teachings of Comrade Enver Hoxha that "work norming is an absolute necessity every where and in every sector, otherwise, it would not be possible to speak about production, about increase of production and about fulfilling the other objectives of the plan" (Enver Hoxha, Reports and Speeches 1969-1970, p 273), and according to the studies carried out, it was possible to reach the conclusion that, in the conditions of administrative work and of calculations, it is possible to establish the norming of work, on the basis of the number of registered activities. The execution of this measure has given noticeable results in increasing labor

productivity and is serving as a means for establishing control over the quantity and quality of the work of every worker and for a correct distribution, on scientific bases, of workers between the structural divisions and sub-divisions of the centers for the mechanization of economic data.

Accompanying these things with the drafting of domestic regulations and a number of other organizational and technical measures, such as, the strengthening of work discipline, the better utilization of work time and the improvement of the level of mechanization and others, a noticeable increase in the average output per worker was reached. At the Center for the Mechanization of Economic Data in Tirana, for example, in comparison with 1975, labor productivity increased by 90 percent. Nevertheless, in this field also there is still much to be done, both in regard to the poor organization of the work place and in regard to the training of workers and to their education and ideological and political and technical and vocational preparedness by expanding the work initiated through the attendance of schools without interruption of work, the organization of training courses and the preparation of themes for scientific sessions and so forth.

Evaluating the process of centralization and mechanization of data and economic information, as an important form for extending the technical and scientific revolution in the field of perfecting the system of management, the Council of Ministers, in its decision of July 1980, assigned important tasks for strengthening and expanding the centers for economic data, for improving the level of their mechanization within a short period and for the mechanization of data in the larger enterprises, such as, "the Steel of the Party" metallurgical combine and the "Enver Hoxha" auto-tractor combine and so forth, and for supplying the needs of the economic enterprises and agricultural cooperatives with simple calculating machines.

The correct evaluation of the tasks and rapid measures to execute them by the ministries, the executive committees of the district people's councils, the centers for the mechanization of economic data and the various enterprises will, certainly, mark a general qualitative improvement of the role and influence of the mechanization of data and economic information in the perfection of the scientific management of the economy.

9150

C50: 2100

FULFILLMENT OF 1980 9-MONTH ECONOMIC PLAN

Sofia STATISTICHESKI IZVESTIYA in Bulgarian No 3, 1980 pp III-VI

[Quarterly report]

[Text] General Notes

The present quarterly publication contains annual, quarterly and monthly statistical data on the basic indicators characterizing the socioeconomic development of the Bulgarian People's Republic.

The STATISTICHESKI IZVESTIYA program covers 12 sections:

- I. Basic Data on the Development of the National Economy
- II. Population
- III. Population Living Standard
- IV. Labor
- V. Capital Investments
- VI. Industry
- VII. Agriculture
- VIII. Transportation
- IX. Communications
- X. Internal Trade and Prices
- XI. Tourism
- XII. Foreign Trade

The data for all sectors are provided according to their organizational and enterprise structures for the corresponding period.

The value indicators are given in prices for the corresponding year. The annual indicators of industrial and agricultural output, capital investments, trade, prices and foreign trade and the monthly industrial output indicators are computed on the basis of comparable prices. Annual indicators are computed on the basis of 1970 while indicators for a period of less than one year are based on the corresponding period in the preceding year.

Data on household cash income, expenditures and consumption are based on representative surveys of household budgets. The data for the current year are preliminary and subject to corrections in subsequent issues.

Explanations of Abbreviations and Symbols

0 - Less than one-half of the measurement unit used

- - No case

. - No data

PAK - Industrial-agrarian complex

APK - Agroindustrial complex

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Development of the National Economy in the First 9 Months of 1980

In the first 9 months of 1980 the labor collectives achieved even better results in increasing the volume of public output. High growth rates were achieved in the overall output of state and cooperative industrial enterprises, retail trade, foreign trade, and others.

Good results were achieved in raising the people's living standard.

Industry

Compared with the first 9 months of 1979 the output of state and cooperative industrial enterprises rose 4.5 percent. The highest pace of output was achieved by the state enterprises in the Chemical and Rubber Industry Sector with 13.1 percent; electrical and thermal energy production enterprises, 8.1 percent; enterprises in the machine building and metal processing industries, 7.2 percent; the leather, fur and shoe industries, 6.5 percent; the fuel industry, 6.3 percent, and others.

In the past 9 months the production of a number of items of importance to the national economy continued to rise. Compared with the corresponding period in 1979 the following increases were registered: electric power, 7.3 percent; coal, 6.4 percent; pig iron and ferro alloys, 0.5 percent; and steel, 0.8 percent.

The additional output of the machine building and metal processing industries was considerable, as follows: electric motors, 9.5 percent; power transformers, 14.1 percent; lathes, 27.4 percent, and others.

The production of some chemicals rose as follows: nitrogen fertilizers, 9.6 percent; caustic soda, 56.2 percent.

The timber extraction and processing industry increased its output of pressed wood and other wood tiles 4.7 percent.

The cardboard output of state cellulose-paper industry enterprises rose 6.0 percent.

The textile industry achieved considerable results in the production of woolen and silk fabrics. Their production respectively rose 12.8 percent and 8.7 percent.

Compared with the first 9 months of 1979 labor productivity per capita of the industrial production personnel employed in state industrial enterprises, computed on the basis of the overall industrial output, rose 3.4 percent. The highest growth rate was achieved by the chemical and rubber industries, the machine building and metal processing industries, the timber extraction and processing industry, the textile industry, and others.

The number of industrial-production workers and employees in state and cooperative industrial enterprises rose 1.1 percent.

Compared with the first 9 months of 1979 the average monthly wage of workers and employees in state and cooperative industrial enterprises rose 14.0 percent.

Agriculture

A number of agrotechnical measures were implemented in the first 9 months of the year in order to surmount the consequences of adverse weather conditions. As a consequence of the adopted measures good results were achieved in animal husbandry. Farm livestock productivity in agricultural organizations and their branches rose. Compared with the first 9 months of 1979, the average milk production per fodder-fed cow rose 1.1 percent. Cow milk production rose by 8,612,000 liters or 0.8 percent; egg production rose by 11.7 million or 1.4 percent.

Compared with the same period in 1979, in the first half of the year purchases from all category farms increased as follows: meat from cattle and small livestock, 6.7 and 1.9 percent, respectively; eggs, 1.5 percent.

Capital Investments

In the first 9 months of 1980 investments in the national economy totaled 448.6 million leva or 13.5 percent more than in the same period in 1979.

Most of the capital investments were in material production sectors, with the highest share going to industry.

A total of 1,361,600,000 leva, or 36.2 percent of the overall volume of capital investments were invested in the modernization and reconstruction of installed production capacities in the national economy.

Capital assets worth 2,324,400,000 leva were installed, 47.8 percent of them consisting of new machines and equipment.

Transportation

Compared with the first 9 months of 1979 the public use transportation system transported 3.2 percent more passengers.

Labor productivity per employed individual rose as follows: railroad transportation, 25.3 percent; automotive transportation, 15.5 percent.

Communications

Compared with the first 9 months of 1979 income from communications services rose by 17.9 percent (by 34,010,000 leva).

Labor productivity per communications worker rose 14.9 percent.

Trade

In the first 9 months of 1980 retail trade in the retail trade network and public catering institutions totaled 8,914,900,000 leva.

Sales of most goods rose including rice, milk, sterilized canned vegetables, eggs, lemons, oranges, olives, brandies, woolen and silk fabrics, clothing, knit outerwear and underwear, hose, shoes, furniture, radio sets, television sets, passenger cars, sewing machines, and others.

Bulgaria's foreign trade relations expanded. Compared with the first 9 months of 1979 foreign trade rose 13.6 percent.

Larger quantities of lathes, electronic calculators, ships and ship equipment, calcinated soda, carbamide and others were exported.

Imports of metal-cutting machines, steam and hydraulic electric power plants, coke, cast iron, coal, steel sheets, wool, watches, and others increased.

The results achieved in the first 9 months of 1980 are a good prerequisite for the successful implementation of the annual and the five-year plans for the socio-economic development of the country and for properly welcoming the 12th BCP Congress.

9003
CSO: 2200

BRIEFS

EQUIPMENT FOR CSSR PROJECT--The Czech [as published] organization Skodaexport has reached agreement with the Metex Cooperative on the purchase of thermal power station equipment worth more than 100 million markkaa. The equipment will go to a coal-fired power station being built in Soma in Turkey. The equipment will be supplied by four Finnish companies--Tamella, Valmet, Kone and Finska Flaektfabriken. Negotiations have been going on for almost a year, and final delivery will take place in 1982. The deal means a continuation of Finnish-Czech cooperation in the field of power stations begun in 1976. [Text] [LD091313 Helsinki HUFVUDSTAGSBLADET in Swedish 7 Jan 81 p 14]

CSO: 2020

GOALS OF MINING, METALLURGY FOR SIXTH PLAN PERIOD

Budapest BANYASZAT in Hungarian No 9, Sep 80 pp 606-609

[Article by Dr Janos Sziklavari, metallurgical engineer, Department Head, National Technological Development Committee, Budapest: "The Developmental Goals of Our Ore Mining and Metallurgical Industries During the Sixth Five-Year Plan Period*"]

[Text] From the viewpoint of the evolution of the society, the most important contact between nature and society involves the cooperative efforts of the mining and metallurgical industries; which supply metallic structural materials to be consumed by society from the mineral wealth of nature.

Not so long ago, mining and metallurgy were the same trade and belonged to the same scientific discipline. Over the years, they became separated. However, recent developments brought them closer together again: the boundaries of technological operations became indistinct; in particular because of the development of production systems in adjacent areas and the creation of new technologies serving the complex processing of mineral products. This trend appears also in the relation of the domestic mining and metallurgical industries.

Figure 1 outlines two terminals of this activity in a survey of the interrelation:

- one of them consists of the mineral wealth of nature;
- the other of the structural metals ready to be used.

The metals contained in the mineral wealth become structural metals after undergoing many technological processes which require a considerable amount of energy. The most important operations are:

- geological prospecting,
- opening up, operating and decommissioning the mines;
- ore beneficiation.

* Lecture presented at the 68th plenary meeting (Tatabanya, 22 May 1980) of the National Technical Development Committee (editor).

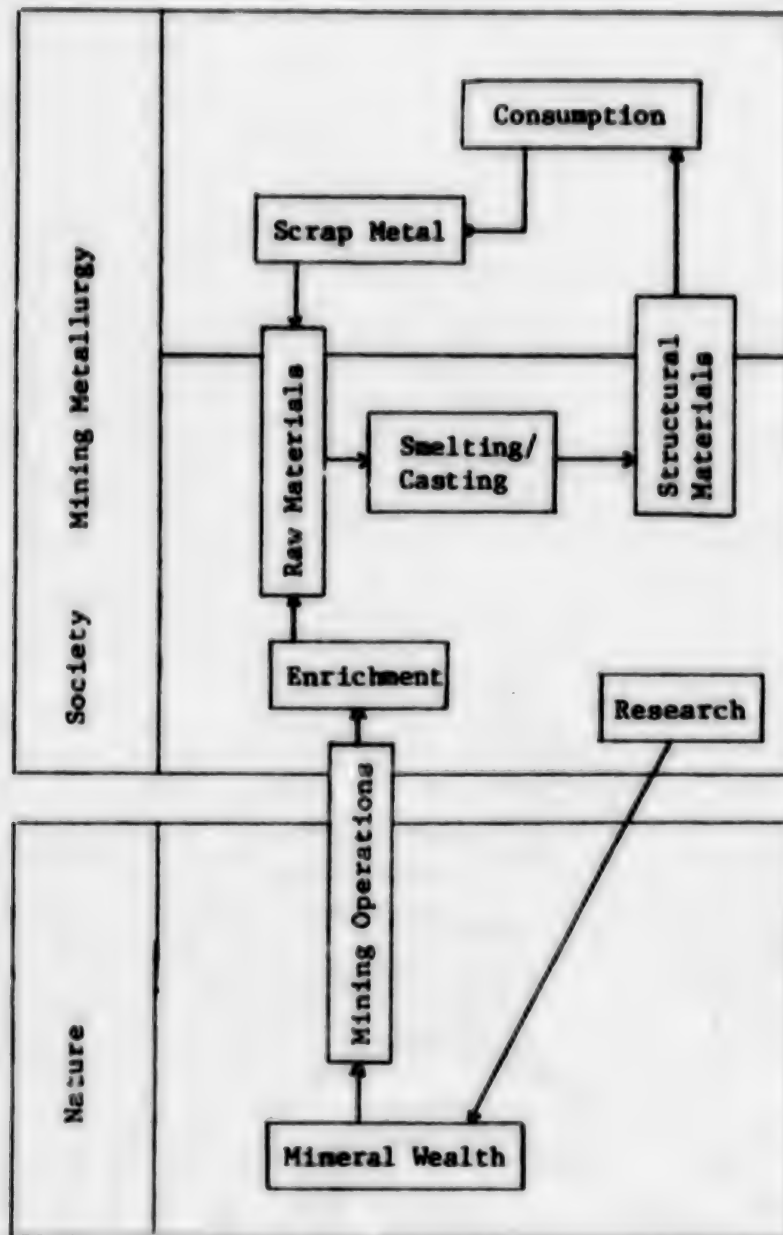


Figure 1

(The arrow between "scrap metal" and "raw materials" is indicated correctly. It is shown incorrectly in the original.)

The metallic structural material desired for consumption is produced from the ore and the concentrate by means of the following steps:

- metallurgical preparation;
- metal refining, purification and casting,
- finishing.

As far as the utilization of metallic structural materials is concerned, our country does not yet reach the level of the developed countries, and as far as certain metals are concerned, not even that of the moderately advanced ones. The amount of metals consumed per capita is low, but in particular we consume small amounts of the highly finished alloys and metals with special properties. It is quite obvious that our development requires a larger share of more valuable structural materials in our machinery and industrial installations in order to increase their usefulness.

The domestic processing industry has several means of obtaining structural metals:

--we can import structural materials;

--the domestic metallurgical industry can fabricate structural materials from imported metals (half-finished goods);

--the domestic metallurgical industry can manufacture structural materials from imported raw materials (ores or concentrates);

--the domestic metallurgical industry can manufacture structural materials from domestic raw materials.

The choice of these possibilities depends on the metal or even the alloy in question, taking into account a great variety of natural, technological, economic and foreign-trade factors, and considering also worldwide trends.

Much has been said about the fact that our earth does not have an unlimited, abundant source of raw materials. However, exploitation must be increased at the same rate as the global consumption. On the other hand, the rate of growth is so high nowadays, that lower-quality deposits must be exploited and processed; they can be mined only under more adverse conditions. In view of the fact that this applies primarily to ores, the mining and metallurgical industries of the world face increasingly difficult tasks. The reason is not that the mining industry is not able to find technological solutions to operate the deeper mines, with their added risks due to water and gas and higher rock pressures, or that metallurgical industry does not have technological methods for the beneficiation of low-grade or complex ores; the difficulties are due to the fact that the mining operation, which must be carried out under more difficult natural conditions and the production of metals from lower-grade ores requires a higher energy consumption. This renders the already very energy-intensive ore production and metal beneficiation considerably more expensive. Thus, it appears probable that the worldwide price level of ores and metals will rise at a faster rate than that of manufactured industrial products, following more closely the rate of increased energy costs.

This trend of the world economy contributed to the formulation of an important long-range goal of our national economy, which requires our mining and metallurgical industries to promote the development of our society by exploiting the mineral wealth of Hungary rationally and utilizing it for optimum benefit.

This means that we should use domestic resources for the production of structural metals, if in the long range this approach appears to be more economical than imports. (Of course, we are referring to metals, the ores of which are available in exploitable amounts in the subsoil of the country; they include aluminum, manganese, silicon, iron, magnesium, copper, zinc, lead, molybdenum, vanadium, gallium and a few other rare metals.)

Let us examine in a broad outline how this long-range goal can be achieved in the framework of our mining and metallurgical development program in the case of the most important structural metals as aluminum, steel and copper.

Long-range development plans can be realized by means of investments for the individual technological stages, during the intermediate-range planning periods. These specific investments present varying demands for material expenditures, and usually are able to bring satisfactory economic results by themselves. Depending on the technological level, the results appear in various areas of national economy. It is obvious that the economic position of the national economy, and the intermediate-range complex tasks determine which areas need these economic results, i.e. which stages receive a priority treatment in the planning and execution of the development.

We, mining and metallurgical engineers, are most closely concerned with the following priorities established for the Sixth Five-Year Plan period: effective raw material and energy conservation; and modernization of the product structure. They set the direction for the intermediate-range development programs of our long-range development policy.

World economic development indicates that the field of aluminum usage keeps broadening, thanks to its excellent properties as a structural material. Although aluminum production has slowed because of energy problems, the growth rate of aluminum consumption, nevertheless, will be the highest among all metals.

The relationship of aluminum and society is characterized worldwide by the fact that natural deposits and areas of consumption by society, in general, are geographically quite far from each other. For this reason, many countries possess manufacturing facilities only for bauxite or possibly aluminum, and only producing or processing the metal. With respect to such countries, Hungary can expect to keep its positional advantage for a long time! After all, a bauxite-based vertical mining-metallurgical industry has been developed for handling the most significant mineral raw material of the country (ranging from prospecting the land to the finished aluminum goods), to a large extent within one economic (enterprise) system. At present, our aluminum industry is an indispensable part of the industrial structure of our national economy and is an outstanding source of foreign exchange. However, in spite of our recognized achievements, we have problems because the various technological stages of this vertical system are not equally strong; the technological level and the product quality level of the individual stages presents a mixed picture compared to the international advanced position. The production capacities of the individual stages differ by nearly an order of magnitude.

On the basis of international comparison, and under the given geological conditions, the level of our bauxite mining industry may be qualified as satisfactory, close to that of the leading technologies. The production indicators and parts of the alumina manufacturing technologies actually reach the world level; on the other hand, the level of the metal-producing electrolysis is low: our aluminum furnaces are obsolete; they require a large amount of labor, and are objectionable from the viewpoint of environmental protection. Neither can our metal-purification technology be considered as advanced. This accounts partially for the position of the average quality of our half-finished goods near the bottom of the world market specifications, although the trend shows improvement. Some of the product groups of the finished goods do reach the world level, while others are far below it.

Our bauxite mining industry, with its annual production of 3 million tons, is in seventh place among the countries of the world, ranking second in Europe. We are responsible for 3.5 percent of the world production, and 17 percent of the European production.

We have an alumina capacity to process 80 percent of our bauxite production; 20 percent of it is exported. In round figures, we produce 800 thousand tons of alumina, amounting to 2.8 percent of the world production. We are in 11th position in the world, and in 5th place in Europe. However, our domestic capacity is sufficient for the electrolysis of only 140,000 tons of alumina. In our furnaces, we produce 70,000-72,000 tons of aluminum ingots. We are not among either the first 30 countries of the world or the first 15 countries of Europe, and we are not making even 0.5 percent of the world production. On the other hand, from the domestically produced ingots and from those imported on the basis of the Soviet-Hungarian agreement, 175,000 tons of half-finished products, alloys and foils are produced; with that production we occupy 16th place in the world, and 10th place in Europe, with a 1.2 percent share in world production.

All this information is presented here because some of it reflects our favorable position, and justifies the development of our aluminum industry within the framework of a priority program both at the intermediate and long-range levels. It is known that of the only five central development programs of our national economy, the Central Development Program of the Aluminum Industry is one. The development plan of this agency for the period after 1980 will soon be submitted to the government.

However, these figures indicate something else: they reveal, among other things, that only 15 percent of the aluminum content of the mined bauxite is extracted in the domestic furnaces. They also point out that the metallic aluminum (which is obtained from the production of domestic furnaces and primarily from leased Soviet furnaces) processed at home into structural material (half finished and finished goods) does not amount to even 40 percent of the aluminum content of the mined bauxite. One-half of the aluminum leaves the domestic vertical system in the form of bauxite, alumina or ingots; it is processed into structural materials abroad. Thus, at present, as far as aluminum is concerned, our national economy plays the role of only a raw-material supplying and basic-product producing country.

From the above the task may be formulated: the production structure of our aluminum industry must be improved. Within the framework of the Central Development Program, the following long-range realizations promise to pay off:

--increase of the furnace capacity by 200,000 tons, with the development of our electrical power generation;

--modernize existing furnaces;

--increase of the half-finished product manufacturing capacity by 150,000 tons;

--increase of the share of alloyed aluminum.

Thus, we would be able not only to maintain our position in the world aluminum production, but to improve it, and in addition, we would contribute to the development of the industrial product structure of the country, and would do this in the field of the production of one of the most important structural metals.

We are confident that during the Sixth Five-Year Plan period--in addition to the completion of the current investments--the investment effort aiming at the broadening of the furnace capacity will be initiated; its first stage will involve the creation of a 100,000-ton capacity electrolysis plant.

Our Ferrous Metallurgical Industry

As far as the supply of structural materials made of iron and steel are concerned, our mining and metallurgical industry does not exhibit such a decisive relationship between the land of our country and its society, as in the case of aluminum production. In the historical past, this relationship has been strong and fruitful; it served as a basis for the significant and highly acclaimed industry developed by Hungary already at the beginning of this century.

Reasons of natural and technological preparedness weakened this relationship. Domestic resources supply only a small fraction of the raw material and energy requirements of the ferrous metallurgical industry. Obtained from imports are: 95 percent of the iron ore, 70 percent of the iron coke, 100 percent of the ferromanganese. We do have iron ores such as limonite, spar iron ores, ankerites, and iron containing red mud, oxide and carbonate type manganese ores and cokable coals.

The neglect of domestic iron ores and red mud cannot be blamed on the ferrous metallurgical industry (even though several decades ago it consumed significant amounts, because during the past 2 decades, pig iron production throughout the world was oriented toward the processing of iron-rich raw materials. We neglected our iron ores and red muds because of their low Fe concentration, but in spite of this, nowadays throughout the world, in all probability, Hungarian metallurgists use charges with the lowest Fe content, resulting in

higher specific slag formation and increased energy consumption. It is characteristic that Hungarian blast furnaces produce 800 kg of slag to obtain 1 ton of pig iron; the corresponding amount in the developed and developing countries is 300-400 kg. The basic reason is that the preparatory stages of our metallurgical technology are not developed.

However, we encounter difficulties not only in iron production, but also in the steel-manufacturing and steel-refining technologies. Even at present, 90 percent of our steel production is prepared by means of the energy and fuel intensive Martin process. We use an expensive technology to produce ordinary steels from the expensive pig iron.

Our underdeveloped finishing technology limits our efforts to improve the product selection, as a result of which the machine industry is forced to use imported steel, even though the ferrous metallurgical industry exports 30 percent of its products. Imports are primarily high-quality steel, exports bulk steel.

In spite of these difficulties and problems, our ferrous metallurgical industry is still one of the most important industrial subbranches of our national economy; its enterprises quite often were rewarded with fully deserved recognition for their outstanding economic results, realized even on the capitalist markets under adverse conditions. It must also be emphasized that during the last decade, the more important technological stages of our ferrous metallurgical industry generally exhibited significant development compared to themselves, but they continued to lag with respect to the leaders of the industry and in some cases fell further behind.

It must be kept in mind that most of the new technologies require newly constructed installations (high-pressure furnaces, large-volume oxygen supplied converters, vacuum containers, casting machines, refiners, fast forging machines, and high-power presses and continuous or specialized rollers). However, these machines are very expensive and can be amortized only with the help of production units which have a capacity exceeding several times that of the installations based on conventional technology.

We simply do not have enough money (and, in the long range, we cannot expect to have enough) to reach or even to approach the most advanced levels in all aspects of the vertical technological system of the ferrous metallurgical industry. In view of this, our development efforts must be very selective. Our development policy does not consider, even in the long range, a significant expansion of our pig iron manufacturing and metal working capacities. Our national economy requires us to use our raw materials and the half-finished products to manufacture structural materials able to compete on any market, at the highest possible level of processing, and the most volume in the form of secondary and tertiary products. The technological level and the quality of the ferrous metallurgical products as structural and machine-tool materials are not only the decisive properties of their marketability, but they affect directly and indirectly their own manufacturing and product structure and also that of the processing industry.

The primary steel-manufacturing investments currently in progress, which will be completed during the Sixth Five-Year Plan period, could possibly improve the product structure of our ferrous metallurgical industry because they are creating the technological conditions for the manufacture of higher-quality steels and even of products which presently cannot be manufactured at all domestically. The economic difficulties of the internal vertical system of our ferrous metallurgical industry will be somewhat alleviated by the construction of the Dunajvaros coking and ore reduction plant. Of course, this will not solve everything; for example, the problem of ore remains; in particular, that of the Krivojrog and Rudabanya ores. However, it is hoped that at least the method of solution will be outlined and its time can be anticipated. It is probable that, in addition to the suitably beneficiated Krivojrog ore, additional domestic iron ores and iron-containing industrial byproducts will also be processed in our blast furnaces.

The above-mentioned investments will, to a large extent, take care of the energy resources during the Sixth Five-Year Plan. In addition, at present we must strive to utilize in the final product at a relatively low-level of expenditure, as large a share as possible of the quality potential that the converters, metallurgical ladle installations and casting machines, currently under construction, will provide.

Our Copper Metallurgical Industry

After steel and aluminum, copper is the most important structural metal. The domestic refined copper metallurgical industry supplies outstanding products, using primarily imported raw materials. Our raw metal production is negligible! However, it seems that as far as this, currently still irreplaceable, metal is concerned, nature has not been too harsh on us.

It is known that, from the viewpoint of the volume and quality, respectively metal content of the copper ore from the area near Recsk is among the 25 largest copper deposits in the world. The site also contains lead and zinc deposits and other metals (such as molybdenum) [which] could also be profitably processed.

The Recsk deposits have a specific mineralogical character and depth arrangement. There are few like it. Therefore, in addition to experience obtained from abroad, we must take advantage of the limitlessly enthusiastic, devoted, domestic knowledge, continuously enriched by new information of our miners, which plays such a decisive role in the exploitation of Recsk.

In the opinion of our mining and metallurgical experts, it appears to be expedient to create--following the example of our aluminum industry--a production complex which, within the vertical system of research, mining operation, ore beneficiation and metal fabrication would insure a competitive production by using advanced technologies and would supply suitable raw materials for the manufacturing units of the Caepel plant of fine metallurgy.

According to our development policy, the effort concerning the exploitation of the Recsk mineral wealth will continue during the Sixth Five-Year Plan

period by a survey of the complex processing methods. This must be done even if the investment is to be realized in several stages.

Finally, coming back to Figure 1, let us consider also the scrap metal problem. We are referring to the aluminum-, steel- and copper-containing materials, parts of which have already served society and have been used up, while other parts represent manufacturing waste. They must be reclaimed and reused. They are valuable because they make it possible to manufacture useful structural material with relatively low energy expenditures. The cost of mining and the preparatory processing of metallurgy may be saved. However, the reclamation requires suitable technological equipment.

Unfortunately, the Hungarian metallurgical industry is not sufficiently well endowed technologically for the processing of scrap metal; because of this, we must export large amounts of high-grade steel, aluminum, copper (and of other metals) waste. Our economic interests--and first of all, energy conservation--require that we fabricate at home structural materials for new use from waste and scrap metals. Therefore, one of the important tasks of the Sixth Five-Year Plan will be to create the technological conditions needed for this task.

In this short review, we were able to outline only the main aspects of the tasks which await us in the field of the production of the most important structural metals. Their solution, and that of the intermediate stages require mostly the joint and mutually helpful cooperation of mining and metallurgical experts; I do believe that all of us will accept this duty.

2210

CSO: 2500

WAGE POLICY, CENTRAL REGULATION OF EARNINGS VIEWED

Budapest SZAKSZERVEZETI SZEMLE in Hungarian No 6, 1980 pp 33-38

[Article by Dr Otto Pirtityi, section chief of SZEKI (Szakszervezetek Elmeleti Kutato Intezete; Trade Unions' Theoretical Research Institute): "Wage Policy and Central Regulation of Earnings." Based on the author's paper presented at a symposium held in Helsinki in June 1980, sponsored jointly by the Finn Labor Movement's Economics Research Institute and SZEKI]

[Text] What are the problems Hungary is coping with in the areas of wage policy and central regulation of earnings? I merely wish to mention briefly a few problems that are presenting difficulties for us, and then to dwell in greater detail on two groups of questions: the objectives and functions of wage policy, and central regulation of earnings.

Differentiation of Earnings

We have professed from the very beginning that the national total of work-related incomes must be distributed among the workers in the same proportion in which they contributed to the formation of national income. We call this the principle of distribution commensurately with the work performed. Differences in earnings must reflect differences in performance.

Assertion of this principle is hampered mostly by the fact that jobs and performances are comparable only within narrow limits. But even if they were comparable, we would still be unable to differentiate earnings on the basis of the actual social usefulness of the activities. For the result of the work of a plant or enterprise collective is a collective result that cannot be broken down into each worker's contribution. We resolve this problem the best we can, by using a central system of job classifications and wage rates, but it sets the upper and lower limits of only the base wages.

Due to the nationwide manpower shortage and to regulation of earnings that considerably curtails a rise in earnings, however, we are unable to establish significant differentiation of earnings even in identical or similar jobs. Vertical differentiation of earnings--i.e., differentiation based on assignment, skill and responsibility--is likewise difficult, and the range is rather narrow. A significant requirement placed on the enterprises over a decade was that they raise the lowest wages at above-average rates. The

narrowing of the vertical range of earnings is creating stresses primarily in the case of highly skilled workers, production supervisors, engineers performing creative work, and the top management of enterprises.

Up to now we have been unable to resolve the dilemma stemming from the twofold task of the central regulation of earnings and incomes: on the one hand to distribute national income among employees, enterprises and the state budget; and on the other hand to create an economic environment that would permit incentive wages. The distribution function requires such regulation of earnings that keeps the annual payroll within the limits specified by the national economic plan, while the incentive function requires regulation that ensures everywhere the additional wages due for additional performance. Thus the two functions cannot be reconciled easily.

In the course of time we tried collective self-interest, under which the results of an enterprise determine not only the year-end profit-sharing but also the annual rate by which the wage level may be raised. This creates practical and theoretical problems primarily because employees now assume income risk and responsibility also for many changes beyond their control, e.g., for a change of the price ratios on the world market. It is entirely reasonable to expose our enterprises to the effects of the world economy--after all, we are an open economy--but we nevertheless feel that this solution can hardly be reconciled with the principle of distribution commensurately with work performance.

A requirement in Hungary is that we offer income security to our workers, but the world market does not offer income security to the Hungarian economy. Our terms of trade have worsened by more than 20 percent in relation to our foreign-trade prices in 1970, and there is little hope of improvement also in the coming years. The principle of wage security and the principle of collective self-interest are hard to reconcile amidst the present conditions of the world economy.

It would be a good thing if we did not have to link to enterprise indicators, respectively to their changes, the enterprises' available payroll budgets and the feasible level of earnings at the enterprises. But there is no other solution. At the enterprises--as we shall discuss further on--there has not developed an automatism of economic activity such that would ensure the necessary profitability on the side of wages, would attach a profit criterion to every forint paid out in wages. Research into this is being conducted at our institute as well as elsewhere.

The third group of our wage-policy problems stems from the fact that wage policy must be formulated under inflationary conditions. We are learning to do this now, and we are not yet able to do it well. The world market has revalued downward Hungary's national product, and therefore it is necessary to revalue downward also our labor. In this we have lagged for many years and are now catching up. Since the population has become accustomed to a continuous rise of cash incomes, it will not tolerate easily a reduction or stagnation of the real value of earnings and transfer payments. We are not employing as yet a moving wage schedule, a system of wage indexing, at least not in relation to individuals. At one time we thought that the

burden of our worsening terms of trade should be borne not by labor but by capital, and therefore we should reduce enterprise profit and not the workers' real wages. This idea fell through, primarily because our enterprises must finance from profit many capacity-expansion and wage-increasing objectives. It became clear that enhanced enterprise independence was meaningful only if the enterprise had money, capital, at its disposal. To balance the state budget it became necessary to increase that proportion of net income formed at the enterprises which is centralized in the state budget, and this in itself significantly reduced the enterprises' net income. Now our objective is to maintain the developed level of real wages, and this is not easy.

Objectives, Functions of Wage Policy

In principle, national wage policy may serve very many functions. Its task is to provide a suitable framework for effective wage administration and material incentives at the enterprises; to compel economic manpower management at the enterprises; to regulate purchasing power; to prevent significant wage-ratio distortions; to direct manpower toward more-economic activities; to modify, in accordance with central evaluations, the ratios of earnings between trades. We have actually burdened wage policy with all these functions. But it soon became evident that it was practically impossible to satisfy every one of these functions. If wage policy provides incentives to reduce the number of employees, then it places in an unjustifiably favorable situation the enterprises where up to now manpower management has been lax, and puts the other enterprises at a disadvantage. If "distribution" becomes the main function of wage policy, the incentive effect of wages becomes weaker: a deflationary wage policy holds performances down. If wage policy safeguards the existing ratios of earnings, it is necessary to install brakes that curb not only distortions of the ratios but also the performances and the freeing of manpower. If manpower allocation becomes a function of wage policy, it triggers a wage-wage spiral, because it soon becomes necessary to increase wages in other areas as well. If wage policy modifies the ratios between sectors, enterprises and trades, it comes into conflict with the labor market's objective mechanism. It predetermines the wage-policy measures in the coming years, because it will be necessary to increase wages where the manpower shortages, due to wage increases in previous years, are the greatest.

We may speak of wage policy--and of policy in general--only if its functions and objectives are arranged in the order of their importance. Five or six objectives and functions cannot be of equal importance, because then none will act with sufficient force in the desired direction. In Hungary this ordering of functions and objectives is rather questionable. For example, equilibrium has priority at present, and therefore the curbing of purchasing power ranks first among the functions of wage policy, and the creation of external conditions for incentive wage administration at the enterprises ranks perhaps last. This ordering, of course, is one of necessity. Everyone knows very well that the correct order is different. We also know that maintenance of earnings ratios, the correction of wage-ratio distortions, and manpower allocation are functions of which wage policy and

regulation of earnings should be freed if they are to be highly effective. But we are unable to do so, for considerations of political realism.

It is common knowledge that in 1968 we introduced a modern system of managing the economy. Although slightly bumpy, this mechanism is functioning well: it has imparted resistance, flexibility and dynamic growth to our economy. Actually we are not ashamed even of our present wage policy and system of regulating earnings. But we already know that all this can be done even better. We also know that it is not always necessary to reach directly for the area or connection that has to be improved, but for its set of conditions. The "principle of creating conditions" or indirect intervention is now starting on its triumphant march--only in the minds for the time being, rather than in practice.

If central regulation of earnings is to provide a suitable framework for incentive wages and better manpower management at the enterprises, then it is not enough to modify merely the system of regulating earnings. If this were sufficient, we would have done so long ago.

At many workplaces, unfortunately, continuous work is not ensured, due mostly to the uneven supply of materials and parts. Thus it does not depend on the workers alone how much they can produce and of what quality. Our foreign partners' ability to meet shipping schedules has declined considerably, nor is everything in order even between cooperating domestic enterprises. By my estimate, the workers' average performance in manufacturing industry would increase by at least 10 percent if these problems were more or less solved. More recently, there are problems also with the stock of orders on the books in one or two sectors, and this is an entirely new phenomenon in our country.

Another condition is that the producer prices must reflect the value judgments of the markets, including the world market. In this area we have made significant progress specifically this year. In all product groups where there is nonruble-denominated export, the domestic producer price adjusts to the export price in terms of level and profit content. In the case of materials and sources of energy, we have switched to procurement prices, and most subsidies have ceased. It will take our enterprise about a year to become accustomed to the new situation.

Lately the rise of the consumer-price level has been causing us considerable problems. Although this could permit a significant rise in nominal wages and differentiation of earnings in accordance with performance, nothing will be accomplished with this potential wage technique. There is exceptionally strong public pressure for everyone to receive annual raises, because the burden of higher prices is felt by everyone. Although a moving wage schedule, a system of wage indexing, has not been explicitly announced in Hungary, in practice it has nevertheless evolved: most of the allocation for wage increases is "split up" at the beginning of the year, which has hardly any incentive effect. According to my estimate based on experience, a rise of about 3 percent a year in the consumer-price level is the limit up to which pressure for a general wage increase, applicable to everyone, is still weak and politically negligible. At present we are slightly above this limit.

In the case of real wages, moreover, we have switched to "zero growth." It is very difficult to differentiate nothing. For if the rate of rise in nominal wages exceeds the inflation rate for one-half of the workforce, the real wages of the other half must decline. Real wages would have to grow by at least 2 percent a year to make possible regulation of earnings that permits incentive wages.

Among the conditions I mention last--although it is very important--equilibrium of the aggregate labor market. For the past 15 years there has been a manpower shortage in our country, and this has distorted the earnings ratios. Much of the allocations for wage increases has been used by the enterprises to entice manpower from other enterprises, and to finance the related wage corrections. The manpower shortage has subsided somewhat this year.

The maximum tolerable rate of inflation, the essential minimum rise in real wages, and equilibrium of the aggregate labor market are conditions that are able to partially compensate for one another's absence. If there were a manpower surplus in Hungary, for example, for a sound wage policy it would be sufficient to maintain the level of real wages, and even a 5-percent annual rate of inflation would be tolerable. If the rate of rise in real wages were between 3 and 4 percent, we could still tolerate a higher rate of inflation and a slight manpower shortage. And finally, without inflation and with the labor market in equilibrium, it would be sufficient to maintain the level of real wages. Our experience does not confirm the proposition that inflation provides wider room for differentiating earnings in accordance with performance.

Our System of Regulating Earnings

Our problems with the regulation of earnings are at least as great as with ordering and reconciling the functions of wage policy. Here again we encounter problems that partially are the same as in the developed capitalist countries, and partially different.

In a capitalist economy the nature of enterprise management, the unambiguous profit orientation, creates almost automatically such a ratio of wages paid to the corresponding added value that both the wage and the profit are more or less acceptable. In Hungary, for a variety of reasons, there has not developed at the enterprise level an automatism which would more or less guarantee a minimum yield, result, that corresponds to a unit of wage cost. There is likewise no guarantee at the enterprise level that a suitable additional performance is linked permanently to the additional wages.

The primary reason for this is the fact that the factory transfer prices --the producer prices--have never been truly "objective," i.e., they have never reflected adequately the value judgments of the markets and customers. They have not met even the minimal requirement that they reflect the actual production cost of the products, that their ratios be input-commensurate. Thus a change in the value of the output--or in the value added--did not signal accurately a change in actual production.

Another reason was purposeful assertion of the principle of full employment, and eventually its spontaneous exaggeration. Hungary's manpower shortage dates back 15 years and is only now ending. On the one hand overemployment drove wages upward, continuously and in a manner difficult to control. On the other hand the manpower shortages at key enterprises compelled exceptional and state-initiated wage increases. Only in this way was it possible to achieve that expensive and efficient plant capacity did not remain idle.

In the absence of an effective internal mechanism at the enterprise level to guarantee the necessary ratio between wages and performance, between wage cost and net income, it became necessary to link them together at the level of the national economy. The way this was accomplished during the first decade of our socialist economy was that every enterprise was assigned obligatory targets, for its output as well as its employment and wages payable. This made enterprise management extremely inflexible.

It was regarded as significant progress when we gradually changed, in relation to wages and output, to self-interest in growth. This meant that from one year to the next the enterprise was able to raise its level of earnings in accordance with how its labor productivity improved. The percentual rise of the level of earnings was linked by a coefficient of less than 1.0 to the percentual rise of the indicator of productivity or efficiency.

Approximately after another 10 years, we switched from wage-level regulation to payroll-budget regulation. For example, if the enterprise's value added increases by 10 percent, then--using a coefficient of 0.3--a 3-percent rise of the payroll budget, and simultaneously of the wage level, is feasible tax-free. Any further expenditure from the payroll budget and further rise of the wage level are taxed very progressively.

Because our producer-price system was modernized and the manpower shortage declined, the conditions for automatically guaranteeing within the enterprise a suitable relationship between wages and profitability improved considerably during the past two years. At the same time, however, there emerged factors that compromised to a large extent wage regulation linked to annual growth.

The shielding of the enterprises from the domestic effects of the world market is being abolished gradually. As a result, the assumption has become illusory that the enterprises will increase year by year the value of their output and their proceeds from sales. The functioning ability of central regulation of earnings based on an index-linked self-interest has declined further, because wages must be increased even when the indicators of output and efficiency do not rise or perhaps decline temporarily. Another problem stems from the fact that the prospects of most enterprises were equal while they were shielded. Now the enterprises in one sector are able to increase their output and profit rapidly, whereas the enterprises in another sector are able to do so only slowly. If we maintain the present system of regulating earnings, the wage level of the less dynamic enterprises, whose activity is nevertheless essential to the economy, will lag unjustifiably and unnecessarily behind the wage level of the other enterprises.

Tensions are mounting also because enterprises that are less profitable, but able to rapidly improve their results from one year to the next, are in a more favorable situation as a result of the self-interest in growth, than are the highly profitable enterprises that are unable to improve their results in the given year.

The direct nature of the world-market effects, the uneven prospects of improving the indicators, and the unfairness of self-interest in growth compelled the economy's central management to link the payroll budget and wage level to the rise of the enterprise's indicator by a very small coefficient (from 0.2 to 0.4). This solution also necessitated constant monitoring of the balance of commodity supplies and purchasing power. The classical method of maintaining this balance is by curbing demand, a deflationary tool.

However, in an economy where there are significant shortages, total employment, great paucity of capital and limited ability of the enterprises to innovate, even a deflationary step leads to a rise of the price level. The low coefficient for increasing wages means in practice that, for example, an 8- to 10-percent increase in output is necessary to raise the payroll budget and wage level by 3 percent. The enterprise that wished to offset the rise of the consumer-price level by raising the level of earnings was obliged to attain a 5- to 6-percent rise in the wage level, which requires either significant layoffs or a constant rise of net output. It is practically impossible to increase the value added by 15 to 20 percent a year, without any change in the number of employees. The enterprises have been "forced" to resort to concealed or open price increases, to introduce product designs that permit new pricing, and to phase out the traditional designs that are no longer profitable. A deflationary system of regulating earnings and the continuous rise of the enterprises' tax burden force up prices in any economy where the market's resistance to price increases is weak and the proportion of "hard" commodities is relatively small.

monetary

One must not overlook the fact that in wage policy a deflationary policy --one that constricts the money supply--is unsuitable in the final outcome to ensure dynamic equilibrium of commodity supplies and purchasing power, because such a monetary policy hampers efficient wage management at the enterprises, and by curtailing the rise of earnings it curbs also the average performances, i.e., the increase of supply.

Behind the present regulation of earnings there is also concern that more intensive stimulation could cause distortions in the enterprises' and sectors' levels of earnings, with no provisions in the state budget for correcting these distortions. A "stagflationary" wage policy has developed whose objective is to maintain the level of real wages amidst inflation. It keeps domestic spending at a level that makes possible a reduction of indebtedness. Once again it improves the nation's equilibrium not through supply-side impulses, but on the side of demand, purchasing and consumption.

power

Under these conditions the trade unions must promote and protect the interests of the workers also in wage policy and regulation of earnings. Closer

examination of some aspects of the economy make it obvious that although the socialist state--by its very nature--is a state that promotes and protects the interests of the workers, there nevertheless is great need for trade unions that view and evaluate the affairs of the economy with the eyes of the hourly and salaried employees, on the basis of their scale of values.

1014

CSO: 2500

WINTER, SPRING GRAIN SOWING PLAN FOR 1980 OUTLINED

Warsaw RADA NARODOWA GOSPODARKA ADMINISTRACJA in Polish No 4, Apr 80 p 43

[Article by Edward Dworecki: "Realization of Current Tasks in Agriculture, Performance of Winter Grain Sowing, Tasks for Spring Sowing Campaign"]

[Text] Grains occupy the greatest position in the national fodder balance. Approximately 70 percent of the grain harvested in our country is intended for fodder. An outstanding increase in their production nationally is necessary to assure conditions for increasing meat and milk production while limiting the expensive import of grains.

Since the 1970's there has been an increase in the area for cultivating grains in the majority of European countries, mainly at the expense of the area for cultivating potatoes. The cultivation of grain has particularly increased in Austria, Denmark and FRG. In Poland, during this period there was a decrease in the area for cultivating grains and potatoes, and wheat cultivation increased. Examples from some countries whose sowing structure includes over 60 percent grains do not support the previously expressed thesis that a large percentage of grains in the sowing structure has a negative effect on their yields. In 1961-1975 mean grain yields per hectare increased from 25.1 to 37.5 q [quintal] in Austria, from 37.0 to 39.1 q in Denmark, and from 29.6 to 40.2 q in FRG.

This shows that it is possible to achieve mean annual yields of grains in quantities greater than 37 q per hectare, even as much as 40 q, in the share of grains amounting to approximately 65 percent in the sowing structure.

The grain program for 1980 and its targets for 1985 are aimed at achieving a mean grain share within the limits of 60 percent in the sowing structure. In accord with these targets the grain sowing plan for the 1980 harvest has been set at an area of 8.3 million hectares, with winter grains covering 5.2 million hectares. Fulfillment of the winter grain sowing plan is presented as follows:

Rye --99 percent of the plan, i.e., 3,015,000 hectares,
Wheat --88 percent of the plan, i.e., 1,669,000 hectares, and
Barley--74 percent of the plan, i.e., 184,000 hectares.

The winter wheat sowing plan for autumn 1979 was not fulfilled. Actually 3 percent more winter grains were sown than the mean grain sowings in 1977 and 1978, with winter wheat being 5 percent greater and winter barley being 127 percent greater, while the rye sowing area was slightly smaller. The winter grain sowing plan was fulfilled in only 13 voivodships, and was significantly surpassed in the Łomża voivodship. In comparison to the Wałbrzych voivodship (21 percent more than in 1978) and in the Zamów voivodship (15 percent more than in 1978).

The sowing plan was fulfilled at the lowest level in the Elbląg and Gorzów voivodships, 83 percent, the Szczecin voivodship, 82 percent, the Legnica voivodship, 80 percent, and the Jelenia Góra voivodship, 71 percent.

Particularly great tasks in spring grain sowing are facing the voivodships in which fewer winter grains were sown in autumn 1979 than in the mean harvest area in 1977 and 1978. These voivodships include:

Warsaw City	99 percent
Jelenia Góra	90 percent
Koszalin	98 percent
Lublin	96 percent
Łódź City	96 percent
Nowy Sącz	96 percent
Olsztyn	99 percent
Ostrołęka	99 percent
Pila	99 percent
Płock	96 percent
Rzeszów	96 percent
Szczecin	98 percent
Zielona Góra	97 percent

The spring sowing campaign must be prepared with special care in these voivodships in order to compensate for past shortages in sowing winter grains and to completely fulfill the tasks in the area of grain areas for the 1980 harvest.

For this purpose it is necessary to conduct a thorough analysis of the fulfillment of winter grain sowing in individual gminas, villages and even farms. The spring grain sowing plan must be prepared on the basis of this analysis and the winter crop state, and a sufficient quantity of seeds for them must be assured.

Organization within each gmina of a sufficient number of points for treating seed grain and dressing it is a very important matter

Controls conducted by the gmina agricultural service show that too many farms are still sowing grain which has not been sufficiently treated and properly dressed. This leads to losses of seed which could be designated for fodder, increases weeds in the fields and disease intensity, and effectively reduces grain yields by a considerable degree.

A second indispensable condition is guaranteeing competent services in the area of spreading mineral fertilizers, in spring liming of soil, in cultivation work and also in grain sowing services.

Area Planted to Winter Grains

Key:

- (1) Voivodship
- (2) Mean in 1977-78, 1,000 hectares
- (3) Sowing plan for 1980 harvest
- (4) Mean 1977-1978 = 100
- (5) Plan, 1,000 hectares
- (6) Fulfillment x /
- (7) Fulfillment percent

- (8) Poland
- (9) Warsaw City
- (10) Biala Podlaska
- (11) Bialystok
- (12) Bielsko
- (13) Bydgoszcz
- (14) Chelm
- (15) Ciechanow
- (16) Czesochowa
- (17) Elblag
- (18) Gdansk
- (19) Gornow
- (20) Jelenia Gora
- (21) Kalisz
- (22) Katowice
- (23) Kielce
- (24) Konin
- (25) Koszalin
- (26) Krakow City
- (27) Krosno
- (28) Legnica
- (29) Leszno
- (30) Lublin
- (31) Lomza
- (32) Lodz City
- (33) Nowy Sacz
- (34) Olsztyn
- (35) Opole
- (36) Ostroleda
- (37) Pila
- (38) Piotrkow
- (39) Plock
- (40) Poznan
- (41) Przemysl
- (42) Radom
- (43) Rzeszow
- (44) Siedlce
- (45) Sieradz
- (46) Skierniewice
- (47) Slupsk
- (48) Suwalki
- (49) Szczecin
- (50) Tarnobrzeg
- (51) Tarnow
- (52) Torun
- (53) Walbrzych
- (54) Wloclawek
- (55) Wroclaw
- (56) Zamosc
- (57) Zielona Gora

(1) Voivodship	(2) Mean in 1977-78 1,000 ha	(3) Sowing plan for 1980 harvest			(4) Mean 1977-1978 100
		(5) Plan, 1,000 ha	(6) Fulfillment x /	(7) Fulfillment percent	
POLSKA	4,777.1	4,777.1	100.0	100.0	100.0
Warsaw City	1.1	1.1	100.0	100.0	100.0
Biala Podlaska	1.1	1.1	100.0	100.0	100.0
Bialystok	1.1	1.1	100.0	100.0	100.0
Bielsko	1.1	1.1	100.0	100.0	100.0
Bydgoszcz	1.1	1.1	100.0	100.0	100.0
Chelm	1.1	1.1	100.0	100.0	100.0
Ciechanow	1.1	1.1	100.0	100.0	100.0
Czesochowa	1.1	1.1	100.0	100.0	100.0
Elblag	1.1	1.1	100.0	100.0	100.0
Gdansk	1.1	1.1	100.0	100.0	100.0
Gornow	1.1	1.1	100.0	100.0	100.0
Jelenia Gora	1.1	1.1	100.0	100.0	100.0
Kalisz	1.1	1.1	100.0	100.0	100.0
Katowice	1.1	1.1	100.0	100.0	100.0
Kielce	1.1	1.1	100.0	100.0	100.0
Konin	1.1	1.1	100.0	100.0	100.0
Koszalin	1.1	1.1	100.0	100.0	100.0
Krakow City	1.1	1.1	100.0	100.0	100.0
Krosno	1.1	1.1	100.0	100.0	100.0
Legnica	1.1	1.1	100.0	100.0	100.0
Leszno	1.1	1.1	100.0	100.0	100.0
Lublin	1.1	1.1	100.0	100.0	100.0
Lomza	1.1	1.1	100.0	100.0	100.0
Lodz City	1.1	1.1	100.0	100.0	100.0
Nowy Sacz	1.1	1.1	100.0	100.0	100.0
Olsztyn	1.1	1.1	100.0	100.0	100.0
Opole	1.1	1.1	100.0	100.0	100.0
Ostroleda	1.1	1.1	100.0	100.0	100.0
Pila	1.1	1.1	100.0	100.0	100.0
Piotrkow	1.1	1.1	100.0	100.0	100.0
Plock	1.1	1.1	100.0	100.0	100.0
Poznan	1.1	1.1	100.0	100.0	100.0
Przemysl	1.1	1.1	100.0	100.0	100.0
Radom	1.1	1.1	100.0	100.0	100.0
Rzeszow	1.1	1.1	100.0	100.0	100.0
Siedlce	1.1	1.1	100.0	100.0	100.0
Sieradz	1.1	1.1	100.0	100.0	100.0
Skierniewice	1.1	1.1	100.0	100.0	100.0
Slupsk	1.1	1.1	100.0	100.0	100.0
Suwalki	1.1	1.1	100.0	100.0	100.0
Szczecin	1.1	1.1	100.0	100.0	100.0
Tarnobrzeg	1.1	1.1	100.0	100.0	100.0
Tarnow	1.1	1.1	100.0	100.0	100.0
Torun	1.1	1.1	100.0	100.0	100.0
Walbrzych	1.1	1.1	100.0	100.0	100.0
Wloclawek	1.1	1.1	100.0	100.0	100.0
Wroclaw	1.1	1.1	100.0	100.0	100.0
Zamosc	1.1	1.1	100.0	100.0	100.0
Zielona Gora	1.1	1.1	100.0	100.0	100.0

according to data from voivodship offices

PLANNING COMMISSION OFFICIAL EVALUATES PROSPECTS FOR AGRICULTURE

Warsaw DZIENNIK LUDOWY in Polish 10 Dec 80 pp 1, 5

[Interview with Prof Dr Eugeniusz Gorzelak, Deputy Chairman of the Planning Commission of the Council of Ministers, by Hanna Lewandowska: "Priorities and Reality, or, Agriculture Next Year and Beyond"]

[Text] [Question] Professor, our economy has very limited resources at its disposal. We must distribute them wisely and rationally, without overlooking the interests of agriculture and the food economy, that is, all of us...

[Answer] In 1981 we will be able to handle only a small fraction of agriculture's needs. Deliveries of the means of production and services to private agriculture are only about 100 billion zlotys, according to our estimates. In the coming year these deliveries and services will increase by about 25 billion.

[Question] Is that a lot?

[Answer] It surely is not much, although we are trying to avail ourselves of all the possibilities. In keeping with the postulates of the Politbureau of the PZPR's Central Committee and the Presidium of the Supreme Committee of the United Peasant Party, the deliveries of cement to the rural areas will be larger, so that 6.5 million tons of cement will find its way to the rural market. There will also be more simple implements and farm machinery allocated for private farming, because, as the result of the restrictions on the investment program, many plants have free production potential which can be utilized to this end. I will go further. In many factories there are various sorts of finished production components which could also be designated for peasant agriculture. Furthermore, it is our intention for many enterprises to undertake the production of goods for which the rural areas are waiting, instead of producing the machinery, which is not going to be used right away, on account of the above-mentioned investment cuts.

[Question] It is easy to talk about it, but it will be more difficult to turn that intention into reality.

[Answer] This should not happen through orders and instructions. It must be profitable for the plants to undertake the new production. On the other hand, the prices on simple farm machinery and implements must not escalate. Hence, we are thinking about introducing some sort of system which would permit a subsidy for those plants which can change the profile of their past production.

[Question] We are talking about simple implements and machinery for agriculture, but not everywhere or on every farm are there still horses. Often they must be replaced by mechanical horses.

[Answer] Unfortunately the Massey-Fergusson tractors on license did not work out for us. Probably the government will decide to produce Perkins motors first of all to install on Polish Ursus tractors, but that takes time too. Practically speaking, the program of supplying agriculture with tractors is 3 years behind. The Fergussons are expensive. They are expensive for the private buyers, although we are paying big subsidies for their production.

[Question] Agriculture is waiting not just for machinery but also for other means of production, those produced by the chemical industry too. Will there be more of such products?

[Answer] The decision has been made for everything that our industry produces in 1981 over and above last year's production -- I am talking about chemical fertilizers, plant protection agents, and chemical components for fodder -- will go to private agriculture. The export of fertilizers will also be held up. Imports of raw materials and partly finished products from the capitalist countries for the production of plant protection agents will be increased by 75 million foreign-exchange zlotys, because we realize that this year we have incurred substantial losses in the fields, gardens, and orchards, owing to the shortage of these products.

[Question] The farmers are also counting on an increase in services...

[Answers] We are not expecting any great improvement here. I have already said that most of the machinery will go to private farming. Hence the cooperatives of agrarian circles cannot count on larger deliveries. The services which they render will therefore increase by only about 6 percent. On the other hand, we would like to make substantial improvements in the market supply of spare parts. After all, we know that many machines stand idle for want of spare parts. There will be more of these. There will also be more batteries, but there will still be a shortage of tires for tractors. We cannot afford to develop this production domestically, and the expected import will not be great.

Here I would like to appeal to all those who determine the supply of the means of production to agriculture, to ask them to understand that what they have on their tables also depends on the efforts they undertake, not just the efforts of the farmers.

[Question] This appeal is justified, because it has been some time that agriculture has had a shortage of the means of production.

[Answer] Of course it is. In keeping with the resolutions of the 15th Plenum of the PZPR Central Committee in 1974, the level of chemical fertilizers in 1980 was to reach 250 kilograms of nitrogen-potassium-phosphorous per hectare. This year we reached a level of 192 kilograms, but realistically speaking, we will not reach the level of 250 kilograms per hectare for 5 years.

Nevertheless, I think that given regular deliveries of natural gas and no interruptions in the supply of electric power to the plants, the rise in the production of chemical fertilizers next year can be substantial. It may be possible to increase the per-hectare application of fertilizer by 20 kilograms.

[Question] Per "statistical" hectare of farmland?

[Answer] I am for having the deliveries of fertilizer to socialized sectors of agriculture remain at the previous level and for allocating all the amount over and above this year's production for private farms.

[Question] With the restrictions on resources for investments, have those undertakings which are to serve the food economy been protected from cuts?

[Answer] I have already talked about restructuring the resources in the industries and giving priority to those sectors of manufacturing which are working for agriculture. At the present time the food industry is enjoying special protection, especially since we are counting on the fact that next year's yields may be larger than this year's.

[Question] But who is going to grind the grain into flour or make the meal?

[Answer] That is just the point. Flour has become extremely important. There is less meat, milk, cheese, and other products, and in this situation bread has become an especially desirable substitute. All the mills are working, with the aid of the old farm mills which have come to them. We are milling flour in Czechoslovakia and the GDR to meet the needs.

Nevertheless, we are thinking about the fact that the lean years may quickly end. Even in May, for example, we can expect a greater flow of milk, and next autumn larger crops of grain and root crops. The food industry should not then become a bottleneck in the food economy.

[Question] We are talking about priorities for today, but the Planning Commission is a body which was created mainly to think about the future.

[Answer] At the moment we do not have much time to consider these matters in greater detail, but I can say that in many reports about the state of our economy coming out of this building, agriculture and its needs have priority. Another sector of the economy which has been put into the forefront of general national needs is housing construction. Hence, we are concerned with meeting man's primary, elementary needs, like food and a roof over the head.

The next conclusion is implied in this. In my opinion, for example, we did not have to plunge into private automobiles but should have given priority to good public transportation.

[Question] I would like to ask a silly question: Are you an optimist, Professor? Do all the goals you are talking about have the chance of being realized?

[Answer] I am a moderate optimist, and I will explain this right away. I am inclined to optimism by the fact that the past few months have convinced just about everyone that food is man's first need. In the past, it is true, we had good targets for farm policy, but its practical implementation was terrible. In 1975-1977 we pulled the peasants off the land. We allocated investment funds mainly to the socialized farms. We even deprived the farmers of the simple, most necessary means of production.

Agriculture is one whole, although it is made up of three sectors, but in the situation where we have meager resources, we have to place them first of all where they can be most effectively used.

[Question] And that means the private farms?

[Answer] Of course. I would not like people to believe that we should neglect the state or cooperative sectors. I think that we harmed both of them in the past by overfinancing them and limiting their independence to too great a degree.

[Question] Hence, the greatest error is to be found in the methods of administration?

[Answer] I think that rational administration of these enterprises and also of the production cooperatives can change a great deal for the better. Simplification of the organizational structures, giving them

greater independence, and basing their operation on economic principles of cost-effectiveness can produce effects which we all wish to see. And this to is cause for moderate optimism, but moderate, because it is very easy when things are going well to wish for more still, but when things are going bad, it is easy to fall into pessimism.

[Question] One often hears the opinion that the situation we are in is the result of many years' neglect of the balance between investments in industry and agriculture. Do you share this view?

[Answer] Yes, that is true, but an equally negative role, one which is perhaps greater, has been played by the fact that in the internal structure of industry, expenditures were reduced for those branches whose production is a condition to food production and processing. Now we are anxious to eliminate these improprieties. Once a correct diagnosis is made -- and I think we now do have one -- it is easier to provide the medicine.

[Question] So that is one more cause for optimism?

[Answer] Of course, although in terms of this coming year, with a good prognosis we do not have alongside it a suitable arsenal of effective remedies.

[Question] Thank you for the interview.

10790

CSO: 2600

FISH SUPPLY, CHANGES IN ASSORTMENT DISCUSSED

Warsaw PRZEMYSŁ SPOŻYWCZY in Polish Vol 34 No 8, 1980 pp 283-284

[Article by Jozef Baj, Managing Director of the Fishery Association in Szczecin: "Fishery, an Important Link in the Nation's Subsistence Program"]

[Text] The basic goal of fishery is to supply the domestic market with fish and fish products. All other activities in this sector are subordinated to this goal. The amount of fish products available to the sales market is dictated largely by the amount and assortment of the fish caught.

In the past, when access to fishing grounds was unrestricted, the choice of fishing regions could be made according to the kinds of fish accepted by the consumer and processor. The new state of affairs restricts Polish fishing to those regions to which it has guaranteed access. As a result, Polish fishery is forced to catch many new kinds of fish, for the most part of differing processing characteristics. This is the unavoidable consequence of the new politico-legal state of affairs in world fishing, on which we have a limited influence.

In recent years, catches of carangids, sardines and bluefish have increased. At the same time, we have been totally deprived of the opportunity to catch herring in deep-sea fishing grounds, and sprat catches in the Baltic Sea have dropped greatly. This trend will continue into next year. Nor do we have any real access to sardine fishing grounds. This places a greater burden on the sector's scientific resources and on the processing staffs in the enterprises. Final products, of optimum quality, accepted by the consumer, must be produced from the kinds of fish that are available to us.

Because the consumers are accustomed to particular kinds of fish, the market has less interest in products from new raw materials, and the consumer is not really affected by the increase in total catches and the greater supply of fish products. One must bear in mind that because the consumer is traditionally accustomed to eating certain kinds of fish, the market will be judged, for a long time yet, in terms of the availability of salted herring, carp, cod, mackerel, sprats and sardines, or the products derived from these fish. In the past year, over 800,000 tons of fish were caught. The domestic market received 254,000 tons of fish and fish products.

The plan for 1980, as it relates to market supplies of fish and fish products, assigns some very important goals to fishery. This year we must supply the market with 265,000 tons of fish products, i.e., 11,000 tons more than in 1979. The

capacity of the deep-sea fishing fleet will not be increased and Polish fishery will have to operate under the same politico-legal world fishing conditions. This means that if catches are approximately the same as those of this year, any increase in deliveries to the market will have to be obtained by more efficient and market-oriented distribution of the catches and by more efficient operation of the commercial apparatus. In 1980, new fishing grounds may be accessible to the Polish fleet, and so also, new kinds of fish. However, we must not expect adequate supplies of the kinds of fish the consumer has had in the past. The change in the assortment of fish caught by Polish fishery appears to be permanent. This sets some very important goals before the sector. In order to deal with this effectively, the Fishery Association has undertaken many organizational and production measures. They include the following: increasing fresh-fish supplies; increasing the stocks of carantids in the smoked and canned fish group; putting a portioned-frozen-fish packing line into operation; packaging antarctic fish in the form of carcasses and fillets; and introducing new products, such as prepared fish dishes, paste in tubes, and marinated delicacies.

In foreign trade, balancing transactions are being developed. These are aimed at obtaining for the Polish market the kinds of fish we seek in exchange for those of which we have an excess. We have also enlarged the role of information—market advertisement of new fish products, well in advance.

The seizure of fish-abundant shelf waters by the coastal countries has enhanced the importance of the Baltic Sea as a source of fish. Although only 25 percent of total catches are made in the Polish zone of the Baltic Sea, nevertheless in size of fish and fish product deliveries, the Baltic's share is much higher, totalling approximately 35 percent. The Polish fishing zone is watched more closely for several reasons. The costs of Baltic Sea catches are considerably lower than the costs incurred in deep-sea fishing grounds. Several-day runs make it possible to maintain regular deliveries of raw materials to the market and to processing plants. And finally and most importantly today, the kinds of fish caught in the Baltic conform to the taste habits of the consumers.

Our operations in 1980, consequently, will be directed toward more effective utilization of fishing opportunities in these waters. This refers particularly to the fishing peaks, i.e., the periods during which the fishing catches are greatest, but the onshore capacity at this time, mainly in storage, processing and transport, is inadequate.

In 1980 we will continue our proven system of cooperation between the fishing boat fleet and the commercial vessels. This will enable us to increase our catches and to better plan our raw materials for consumption purposes. Although this is a rational move under the existing circumstances, we look upon it as an emergency solution, for we want to adapt our onshore facilities in ports to peak catch conditions.

If deliveries of fish and fish products are to be further increased, it will be necessary to obtain additional space in cold-storage plants, increase the specialized truck fleet, and obtain more refrigerator cars and box cars from the Polish State Railroads. These are fundamental problems in proper fishery operation and they must be dealt with in 1980. An important problem, particularly in the fourth quarter of each year, is ensuring that the market has the required amount of carp

and salted fish. Each year this situation has become more difficult. Polish fishery has been totally denied access to deep-sea herring fishing grounds. In addition, producers have been delivery less carp each year. Carp and herring are the kinds of fish which by Polish tradition have the greatest effect on the public's perception of the market's adequacy. To alleviate this situation, more Baltic herring will be salted this year. But this has it negative effects, for it reduces the supply of very valuable stock for the canning industry.

In order to ensure a sufficient supply of carp on the market during the holidays, fishery is forced to import it at high cost. This is a situation which must be rapidly corrected with the assistance of the Ministry of Agriculture, for we have everything with which to be self-sufficient in this field. We are convinced that action taken should produce results as early as this year. The cooperation of fishery with the Ministry of Agriculture depends mainly on supplying the fresh-water fish farmers with more feed and fry.

Fishery has gone a long way in recent years in reducing the increasing costs that result from the longer journeys to fishing grounds. Ships remain on fishing grounds for periods of several years. Fish are hauled from fishing grounds by ships from the auxiliary fleet. Crews are changed every six months by air. Routine overhauls and repairs of machinery and equipment are made by the ship's crews. We must continue to do more in this field, for fishing costs continue to rise from reasons beyond our control and we must resist this.

Despite the difficulties which the Fishery Association has had to deal with recently, and many with which it is still struggling, further expansion of fishing is socially indispensable.

This is essential both for reasons of dietary requirements as well as economic conditions. Fish protein is still much cheaper than animal protein, and there is no indication that this will change soon.

Irrespective of the higher costs of obtaining fish, costs of animal production are also increasing. Of course, this does not mean that fishery does not have to look for ways to reduce these costs. We devote a great deal of attention to these problems in our work.

The activities of the Fishery Association, in 1980 and in the future, will be directed toward ensuring a systematic increase in fish consumption in our country. We regard implementation of the national subsistence program as an important goal which we will methodically and responsibly achieve.

9295

CSO: 2600

SHORTFALL IN CRUDE OIL EXTRACTION PLAN ANALYZED

Bucharest SCINTEIA in Romanian 20 Nov 80 pp 1, 2

[Interview with Gheorghe Vlad, deputy minister of mines, petroleum and geology, by Dan Constantin]

[Excerpts] Question: The fulfillment of the plan for the extraction of crude oil is one of the major problems of the national economy. How do you estimate the achievement of the production stipulated for this year?

Answer: Despite the efforts made by the petroleum units and the ministry, the planned production has not been achieved so far.

Question: What are the causes of the shortfalls in the extraction of crude oil?

Answer: In recent years the level of production of extracted crude oil has been unfavorably affected by the reduced volume of reserves discovered through geological operations, which year after year has been smaller than the yield extracted, and by the natural decrease in the production potential of some old deposits. It has been possible to stop this decrease in production and the average daily level of production increased about 1,000 tons in October compared with January 1980.

Question: Nevertheless, achievements are still below the plan. What are the other causes of this situation?

Answer: I think that results could be better. There are many causes of the failure to achieve the planned production. We cannot fail to mention a number of deficiencies which are still appearing in the drilling and extraction activity, which have a direct effect on the achievement of the planned production. The delays in the achievement of the deep drilling programs, the incomplete utilization of the entire supply of drills, the poor operation of old drills, the long period between the drilling and the putting of new derricks into operation, the long and unproductive time spent in drilling wells and in the activity of intervention in wells, and the failure to provide all the necessary working cadres in a number of units are all causes of the failure to fulfill the plan. The leadership of the ministry and of the trusts, the party organizations and the workers' councils in the units are continuing to take action to eliminate these deficiencies in our activity and we are convinced that they will be eliminated.

However, the decline in production which we mentioned would not have reached such a level if greater emphasis had been placed on work to discover new geological reserves. The weakening of activity in this field and a number of deficiencies which have been evident are now showing their consequences. These things were discussed at length at the conference with geological cadres and the programs discussed on this occasion and the directives which we have received from the secretary general of the party will set things right.

I would like to stress the great interest on the part of petroleum workers in the decision of the party leadership to give supplementary incentive to collectives of workers who exceed the planned production of crude oil and gas. It is necessary, also, that, in addition to us, the enterprises supplying equipment and materials from other sectors of the economy also increase their efforts. Without implying that we are not responsible for the shortfalls mentioned, I must state that our units are confronted with a number of difficulties caused by the failure of some enterprises of the metallurgical, machine building and chemical industries to respect obligations assumed under contract.

Question: What equipment and materials have not been delivered in accordance with the contracts?

Answer: Unfortunately, the list is very long. In 9 months we have not received 9,500 tons of tubing pipes; most of them are still in the Roman pipe enterprise which has not delivered 9,200 tons of thermally treated pipes. As a result a number of deep drilling oil wells could not be completed. Likewise, the lack of 6,200 tons of tubings, an order not honored by the Roman unit, prevents us from putting into operation about 200 drilling wells. In regard to drilling pipes, the contract has been honored by only 70 percent and the lack of 2,500 tons of pipes has caused great difficulties for the petroleum workers. We are obliged to work with worn-out pipes which sometimes leads to technical accidents which are extremely complicated and costly. Also the "Republica" enterprise in Bucharest has failed to deliver more than 1,800 tons of threaded pipe, which creates serious difficulties in linking the oil fields with the areas for the collection of crude oil, as well as 10,800 tons of 400-millimeter pipes which are needed for main gas lines.

I have not finished the list. I would like to mention the significant lags in deliveries from machine building units. Some 70 drilling installations manufactured in the "1 May" factory in Ploiesti cannot be put into operation since the "23 August" enterprise in Bucharest has not delivered the thermal activation motors. Also, the "23 August" plant has not delivered cardanic axles for transmissions in dirt pumps which makes 10 drilling installations unusable. The "1 May" plant in Ploiesti has not received 41 installations for the prevention of breaks. The petroleum equipment enterprise in Tirgoviste has not received rotary tables, hydraulic heads, and unit pumps. In 9 months, the enterprise for chemical and drilling equipment in R. Vilcea has not delivered one of the 400 pumping units ordered. The enterprise for heavy machinery in Bucharest has not honored its contractual obligations in regard to heavy pipes, completely forged and thermally treated.

Question: We know quite well that Romania constructs petroleum equipment and is also one of the principal exporters. But, from what you have told us, one could conclude that the equipping of our petroleum industry is being neglected.

Answer: The petroleum equipment which we receive is good. I want to emphasize the fact that we are not receiving the quantity established by the plan, in accordance with the contracts, despite the consequences of this situation. Of course, there are shortcomings in the activity of our own units. We know them and are acting to eliminate them. What I have said about the shortfalls of other sectors does not mean an absolving of our responsibilities. The shortcomings which I have mentioned can be eliminated. All sectors, all units participating directly or indirectly in the petroleum industry must coordinate and intensify their efforts. Now is the time for concrete actions.

Editor's Note: We agree completely with the critical and self-critical analysis presented above. On the basis of the unsatisfactory situation in the fulfillment of the crude oil extraction plan and the shortcomings and difficulties existing in this vital sector of the economy we will continue to present reports on the way in which these problems are being solved, the efforts which are being undertaken by petroleum workers, geologists, and suppliers of equipment and material for increasing crude oil production and equipping this sector of the economy. SCINTEIA opens its columns for discussion of the most important aspects on which the rise of the level of production of crude oil depends and invites workers and specialists in the production and research units to express their opinions and views in regard to this matter.

CSO: 2700

GEOLOGICAL RESEARCH TO MEET ECONOMIC NEEDS DISCUSSED

Bucharest HRA SOCIALISTA in Romanian No 23, 5 Dec 80 pp 5-7

[Article by Dr Iosif Bercia, director of the Institute of Geology and Geophysics:
"The Problems of Geological Research and the Requirements of the National Economy"]

[Text] Among the profound changes that our economy is registering in the light of the directives of the 12th party congress, great responsibilities with regard to better geological knowledge of the territory, as well as the development of specialized basic and applied research, for improving and raising the efficiency of the entire geological activity in the phases of prospecting and exploration, in order to provide for the growth of the base of mineral resources at a brisk rate, devolve upon scientific research in the field of geology and geophysics.

In this context, the Conference of the RCP Central Committee With the Actives in the Field of Geology, which was held at the end of October of this year, represented a significant event for all of the geological activity in our country, constituting at the same time the framework for thorough analysis and scientific research in this field. In the speech at the conference, Comrade Nicolae Ceausescu, referring to the strategy for the geological activity in prospect, stated that, starting from the important achievements that have been obtained, especially in recent years, in knowing and utilizing the riches of the country's subsoil, it is necessary to intensify and diversify the activity in this field, in order to provide for the growth of the base of mineral raw materials for all substances, speed up the rate at which they are drawn into the economic circuit and reduce imports to the utmost.

Directions and Results of Geological Research

The concept of geological research utilized by us in the current language defines in fact the complex geological activity that includes scientific research, prospecting and exploration. The first phase of scientific research in the field of geology and geophysics is achieved—for solid mineral substances, geothermal resources and mineral water—by the Institute of Geology and Geophysics and—for petroleum and gas—by the specialized institute in Ciampina. The phases of prospecting and exploration are performed by specialized enterprises of the Ministry of Mines, Petroleum and Geology, located throughout the country.

First of all, I would like to point out that, in the past few years, the scientific research in this field has registered a number of significant results. Of them I should mention, in particular, the raising of the degree of knowledge of the country's geological structure by intensifying the program for preparing the geological, hydrogeological, metallogenetic and geophysical maps for zones of economic interest, as well as by developing the complex research for delineating the forecast and planning the very deep drilling. New prospective areas for nonferrous, gold-bearing and silver-bearing ores, including in continuing with the well-known zones in the Eastern Carpathians, the Ore Mountains or the Western Mountains, have been distinguished during the current five-year period.

One field of expansion and diversification of research is that of marine geology, on the Romanian continental platform of the Black Sea. Investigations with complex methods (bathymetry, sedimentology, seismometry and magnetism) have led to the distinguishing of sand with concentrations of hard minerals in this zone, there being obtained at the same time interesting results concerning the relief of the seabed, the thickness and the nature of the sediments, and the deep geological structure—with implications for the research referring to the placement of the offshore drilling platforms.

Through the development of interdisciplinary research, there has been success in the application of new methods of geological investigation, such as the determination of the isotopic composition of the sulfur in ores, in order to unravel the metallogenetic processes, the establishment of the copper, lead and zinc content right in the field, as well as the development of other peak methods (magnetotelluric, shadow, mercurimetric and teledetection). Algorithms, programs and models used in improving the geophysical methods of prospecting, in studying the coal deposits or distinguishing the geothermal resources and in calculating the operational variants for the big deposits of nonferrous ores have been prepared on the basis of the wide utilization of mathematical tools in geological research.

Another important direction in which geological research has gone consists of the delineation of the forecast of geothermal resources through the substantiation of the planning activity in the zones of interest, as well as the distinguishing of new resources of thermal and mineral waters. At the same time, syntheses with the calculation of the reserves (on the basis of the drilling work) for the coal deposits in Oltenia and studies for optimizing the systems of geological and hydrogeological work for these deposits have been achieved in collaboration with the benefiting units within the Ministry of Mines, Petroleum and Geology. In collaboration with the production units, there have been drawn up many projects of prospecting and exploitation that, in recent years, have substantiated geological work of about 1 billion lei, with important reserves of nonferrous ores being delineated in the Ore Mountains and the Eastern Carpathians.

Along the line of the technological laboratory research requested by production, good results have been obtained with regard to the utilization of poor copper-bearing ores and of nonmetal-bearing substances (limestone with crossite, pyrophyllite, potash feldspar and so on). In addition, a number of site studies for construction, geotechnic studies and studies for seismic zoning of the country's territory have been made at the request of other branches of the economy.

At the same time, I should mention that, with a view to the introduction of technical progress into geophysical research, various types of highly technical apparatus (protonic magnetometers, geothermometers, resistivimeters and so on) have been achieved through self-equipping, with significant savings in valuta thus being registered.

The Complex Approach to the Objectives

The necessity of solving the problems with a high degree of difficulty—connected with the distinguishing of the mineral resources under complicated geological conditions, located at great depths or having a wide range of useful components—requires the approaching of the geological objectives with the most modern means, by simultaneously using many methods of investigation (geological, geophysical, geochemical and so on), with the research thus often acquiring an interdisciplinary character. Such a complex approach in geological research is necessary today, because it helps to obtain high-quality results and to substantially reduce the duration of the investigations, there being created, in consequence, the conditions for more rapidly developing the base of energy and mineral raw materials so necessary to our national economy.

Such a new attitude toward the major problems that confront scientific research in geology and geophysics are also reflected in the view on the preparation of the research plans for 1981 and of the draft plan for the 1981-1985 five-year period. Thus, on the basis of the forecast of mineral resources, complex geological and geophysical investigations are planned, with a view to delineating the prospective areas for combustible shale and coal in the Eastern Carpathians, Moldavia, the Transylvanian Alps, Banat, the Transylvanian Depression and the Getic Depression—with paleontologic, hydrogeological, tectonic, seismometric and mathematical-modulation methods being used, in combination, for this purpose.

Regarding geothermal resources, new zones will be searched for thermal water in the Moesian Platform and for dry heat in rocks in the Calimani-Gurghiu-Harghita volcanic chain, there also being used here methods of geothermometry combined with those of teledetection, modeling of geological structure and so on.

In the spirit of the tasks established at the Conference With the Actives in the Field of Geology, greater attention will be devoted to the research for pinpointing and utilizing complex ores with a low content and nonmetal-bearing substances. Thus, with the help of a wide range of methods (mineralogical, petrographic, magnetometric, neutron activation, magnetic separation and so on), the crystalline schists in the Eastern Carpathians, the Transylvanian Alps and Banat, as well as the basic and ultrabasic rocks with a low content of magnetite and accompanying elements (nickel, chrome, cobalt and so on), will be searched for iron and manganese ores. In addition, the intensive application of combined specific methods (metallo-genetic, structural, electrometric and magnetometric) to the investigation of the prospective areas for nonferrous, gold-bearing and silver-bearing ores is also planned: for poor copper-bearing ores in the Ore Mountains, for complex ores (copper, lead and zinc) in the Eastern Carpathians and the Western Mountains, for alluvial deposits with precious metals in the sub-Carpathian zone of the Transylvanian Alps, and so on.

Nonmetal-bearing substances and useful rocks will occupy an important place in the sphere of geological activity, in the context of distinguishing and utilizing all

the mineral resources existing in a certain area. The complex research of this nature will be developed with the view to delineating the prospective areas, for example, for barite in the Eastern Carpathians and Banat, talc in the Transylvanian Alps and the Eastern Carpathians, kaolin in the intramontane basins, volcanic tuff in the sub-Carpathian zone of the Eastern Carpathians and in the Transylvanian Depression, salt in the Transylvanian Depression, magnesians rocks and asbestos in Banat, and sandstone and quartzitic sand in Moldavia.

The research in marine geology, too, on the continental platform, will benefit from, besides the sedimentological, bathymetric, seismoelectric and magnetometric methods utilized in the past few years, the introduction of the marine gravimetric methods, which will help to unravel in an integrated manner the deep geological structure of the sea area, to expand the knowledge of the mineral potential of the continental platform (hydrocarbons and sand with hard minerals, like ilmenite, zirconium, rutile and so on) and, in the future, of the continental slope, as well as of the deeper zones of the Black Sea.

The further implementation of the program for preparing the national geological and geophysical maps, on various scales and of various types, maps that will synthesize the stage of the knowledge obtained from the entire geological activity on the country's territory, as well as the information resulting from the basic research done with methods of the most modern kind, will constitute a field, perhaps the most significant one, of complex utilization of all the methods of geological and geophysical research. For research on the deep and very deep geological structure, the development of the collaboration with the Center for Earth Physics within the Central Institute of Physics is planned.

As follows from the things pointed out, the complexity of the research themes requires specialists of very different types, necessitating at the same time as good organization and management as possible of scientific research on a basis of programs. In this way, the more efficient pursuit of the whole research-planning-production cycle, as well as the unified coordination of the activities for the main fields of research and types of resources, will be provided.

The measures established at the conference in connection with improving the activity of the complex teams organized for the period of the field campaigns are in a close dependence on the approach to the geological objectives on various planes. Such teams must offer the widest possibilities for organized collaboration, for the holding of a direct dialog, in the field, between researchers, geologists in the activity of prospecting and exploration, and specialists at the mining operations on the territory. Such collaboration will have extremely important implications for increasing the effectiveness in adopting the decisions, in reconsidering objectives—including in establishing with a certain leadtime the research themes with a view to contracting, in granting scientific and technical assistance, and so on.

In order to attain the highly responsible objectives that confront geological research, it will be necessary for us to devote special attention—as Comrade Nicolae Ceausescu pointed out at the conference—to continually improving the research methodologies and techniques, to introducing technical progress. As, in fact, in all other fields of research, the development of peak techniques is decisive in geology, but especially in geophysics. It is known that research's efficiency is, as a rule, influenced directly by the rate of modernization of the means of investigation.

In this context, I should mention that, in the next five-year period, the development of the various new methodologies and techniques of investigation (techniques of teledetection, aerogeophysical methods, seismic surveys for the discovery of coal deposits, for the technological utilization of poor ores, and so on) is planned. In the field of marine geology, the further improvement of the methodologies that would permit the performance of research in the deep zones and the investigation of the mineral resources of the ocean is in view.

All these new methodologies will also be developed by intensifying the interdisciplinary collaboration with other institutes, in the fields of physics, chemistry, biology, mathematics and so on. At the same time, however, it is also necessary to improve the system of information for our specialists, by properly organizing the geological fund and the national geological library--instruments that are indispensable for specialized research.

Long-Term Orientations

In order for the scientific research in geology and geophysics to respond as well as possible to the requirements of the current stage of development of the economy, but also to the long-term ones, concomitant with providing for progress in the basic sciences, in the 1981-1985 five-year period we will proceed to orient the activity in this field toward strengthening the collaboration with the benefiting units on the territory, with the prospecting and exploration enterprises, with the operational units subordinate to the Ministry of Mines, Petroleum and Geology--both within the framework of the work in complex teams, in the field, and through the organization of discussions with a scientific and economic character, of joint sessions of scientific reports.

Along with the application of the new economic and financial mechanism, by means of self-management and self-administration it will be possible to more clearly distinguish scientific research's efficiency and its contribution to drawing the mineral resources into the economic circuit, as well as into other fields of the economy. I feel that this is an essential aspect, because, at present, for the most part, scientific research's contribution--often decisive in the process of knowing the mineral potential--remains hidden within the immense volume of work that follows the phase of identifying and delineating the prospective zones.

The providing of the specialists for scientific research represents an extremely important problem for the development of the future activity. In connection with this, I feel that it should be mentioned, for example, that, at present, the average age of the researchers at the Institute of Geology and Geophysics is 45 years and there are big difficulties in attracting to research the specialists in the production units.

As was pointed out at the conference, for developing the geological activity on the territory it is planned that, beginning in 1981, over 75 percent of all geologists and geophysicists in scientific research will perform activities in field campaigns. In the same regard, it is intended that the development of the research activity will be done in the future through the assignment of graduates to research after the probation in production, particularly at the branch offices that are expected to be developed or founded (the Laboratory for Marine Geology and Sedimentology in Agigea, the Geophysical Laboratory in Covasna, the Geophysical Laboratory in Sulari and the Branch Office in Cluj-Napoca).

The providing of personnel with specialized middle training (technician geologists, geophysicists, surveyors and cartographers) represents an acute problem, to which end the possibility of reestablishing the postsecondary school with a specialty of geology, geophysics, surveying and geological cartography is being examined. At the same time, in view of the requirement of intensifying and diversifying the activity provided in the programs for research and development and for introduction of new methodologies and techniques into scientific research in the field of geophysics (underground geophysics, geothermometry, aerogeophysics, teledetection and so on), it appears necessary to increase the number of research geophysicists in the next five-year period.

A role of the highest responsibility in connection with providing sources of energy and raw materials to the economy devolves upon the research in geology and geophysics. The development of the production forces and the strengthening of the technical-material base, as well as the raising of the material and spiritual standard of living of the people by means of growth in national wealth—under the conditions in which, as Comrade Nicolae Ceausescu pointed out, "we intend to achieve, by the end of the 1980 decade, complete independence with regard to the energy supply"—require a strong intensification of the activities of identifying, pinpointing and proceeding to exploit the sources of energy and raw materials. The obligation to impart, by means of close and permanent collaboration with the specialists in production and planning, as high efficiency as possible to these activities devolves upon the geological and geophysical scientists.

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ROMANIA

OLTENIA COAL BASIN OPERATIONS: PROBLEMS, SOLUTIONS VIEWED

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[Article by Vasile Boescu and Padure Bogdan: "The Raising of Coal Production to the Level of the Economy's Needs" (Part V) -- for previous installments of this article see JPRS 76515 No 2046 of this series, 29 Sep 80 pp 79-88 and JPRS 76826 No 2063 of this series, 17 Nov 80 pp 45-55]

[Text] The discovery and use of raw material and energy resources constitute one of the cardinal problems of our economic development. This is due, on one hand, to the spiraling increase of prices for raw materials from foreign suppliers and, on the other hand, because of the restrictions of the amount of available reserves in the world. International economic circumstances caused the price of coking coal to increase from \$27.70 per ton in 1972, in other words prior to the beginning of the oil crisis, to over \$71 dollars per ton this year. But, we are not speaking solely of the hard currency costs that coal represents right now. Let us note that one ton of lignite produces the energy necessary to supply 320 apartments for a day.

Keeping in mind the special importance that coal has for our economy, the party leadership has followed and is following closely the flow of production in this sector, establishing measures to achieve the plan provisions. In this regard, in the 5 November 1980 Session of the Political Executive Committee of the Romanian Communist Party Central Committee problems were examined regarding the extraction of coal and the proper supply and operation of the thermal power stations that use coal. Measures were established to improve extraction activities and, especially, for the daily delivery of the full quantities of coal extracted for use by the thermal power stations.

In light of these tasks of special importance for the entire national economy, we are continuing the investigation undertaken by our magazine in the great coal basins (Nos 31, 33, 37, 39/1980) regarding the means for a more active involvement of the principal factors capable of leading to the achievement of planned tasks and to the preparation of conditions for fulfilling the tasks in the coming five year plan under the best possible conditions.

Increasing Extraction Capacities

The mining in the Oltenian basin occupies a priority spot in coal production in the country, having the task of mining and delivering to the electrical power stations over 32 million tons of lignite this year. A series of mining operations of this great combine are regularly achieving their plan provisions and, on this basis, are honoring the concluded economic contracts on-time. Thus, for example, the miners carrying out their activities in the micro-pits in Valea Motrului have exceeded their plan tasks by 17 percent from the beginning of the year in extracting and expediting coal to users. Among the collectives that have made their special contributions to this achievement are those at "Meris-2" and the Rosiuta and Plostină micro-pits, where the supplementary production exceeds 300,000 tons of lignite extracted and sent to users. Similarly, the Jilt Mining Enterprise has delivered over 8,000 tons of lignite daily to users in the last 2 months. Good results in the fulfillment of plan tasks have also been recorded by the Leorda, Lupoala, Gîrla, Matasari and Albeni mining collectives. The improvement of the quality of the coal also represents a positive fact. This year, as the specialists in the Oltenia Mining Combine estimate, the caloric value of the coal delivered to the thermal power stations has risen on an average to 1,673 calories compared to 1,400 in 1979.

The increase in the contribution of the mining units in the Oltenian basin in providing coal for the electrical power stations is especially based upon the increase in the degree of mechanization of work. In the pits there are currently operating five types of excavators with a production capacity of between 600 and 2,500 tons of coal per hour. These actual "factories on tracked wheels" were produced by our machine building industry beginning in 1973, with their level of integration reaching over 90 percent at the end of this year. In the Gîrla, Tismana I and II, Rosia de Jiu, Rovinari-Est, Pesteană, Jilt-Sud and Lupoala pits there are currently 26 of these giant pieces of equipment operating compared to the only 11 that existed in this region in 1975. As the technical equipment supply plan calls for, by 1982 we will build in-country for the specialized coal mining units at least 15 rotor and cup excavators, each capable of extracting 1,800 tons of coal per hour.

And, in underground mining activities improved equipment was put into operation and high efficiency technologies, such as domestically produced machinery to support the coal-face and to mechanically cut the coal, coal car and conveyor transporters, equipment for digging galleries and so forth, were introduced which contributed to the achievement this year of a production increase of over 11 million net tons of coal (lignite and brown coal), compared to 1975.

At the end of the 11 months of this year that have passed, an analysis of the level of achievements nonetheless shows that significant quantities still remain to be recouped from old shortfalls. The measures taken for the last quarter of 1980 currently ensure the daily achievement of a production of 85,000-92,000 tons of lignite for the entire combine, a level close to the plan provisions. In the last 2 months of this year, the miners in Gorj extracted approximately three million tons of coal from the pits and mines, with two million tons

still to be achieved during December, thus fulfilling the pledge made to extract at least five million tons of coal in the last quarter of this year. Also to help increase production, in the immediately coming period new capacities will be put into operation in the Jilt-Sud, Tismana II, Pesteană-Nord and Moii pits that will daily provide 12,000-14,000 tons of lignite. We emphasize the fact that for 1981 production capacities will be provided that are necessary for fulfilling plan tasks under better conditions.

Using Power Equipment at Projected Capacities

The extraction of coal from the pits requires, first of all, the existence in the mining units of the technological power equipment for excavating and transporting coal at the level of plan provisions for technical equipment. From this point of view, we must note the gap which exists between the provisions and the achievements in deliveries, assembly and use, especially for excavators and waste dump equipment. According to the equipment program for the extraction industry, during the next 2 years the coal mining units in Oltenia must receive 15 high-capacity rotor excavators and 6 machines for depositing waste rock. And, although we are near the end of 1980, there are delays in putting this equipment into operation. Moreover, not long ago a new schedule was completed with representatives of the Ministry of the Machine Building Industry, according to which the majority of this equipment will be assembled in the first part of 1981.

In order to recover the shortfalls, it appears necessary to give priority concentration to the efforts in the producing units to make and urgently forward these types of power equipment, especially for the great basins in Oltenia and Valea Jiului. Similarly, it is necessary to increase effectiveness in assembling the technical power equipment by delivering the large sub-assemblies already assembled by the producer and by intensifying the user's help in the general assembly of these new production installations. For example, at Rovinari we are talking about completing the start-up of four excavators and the number three waste dump line at Rosia, about finishing work on the number two excavator and the coal line at Jilt, about putting into operation the main coal line at Tismana II, and a new excavator and waste dump line at Lupoaia, and so forth.

At the same time, the regular non-achievement of plan tasks is also due to the fact that some equipment in inventory does not operate at full capacity. The amount of available work time is used at a rate of only approximately 80 percent, compared to the 75 percent outlined in the plan. The causes lie in the fact that, as the specialists at the Rovinari Mining Enterprise pointed out, some of the equipment (bulldozers, waste disposal equipment, hydraulic systems in the base of the support equipment of the gallery diggers, power stations on the underground conveyor belts) is not adapted to the specific conditions of mines and pits. For the existing bulldozers, for example, engine power is less than that needed in pit mining technology. Similarly, it is estimated that the current models of dump trucks delivered do not meet the specific conditions required by stripping operations in the pits, which causes interruptions in operations and decreases in the quantity of coal extracted and transported to users compared to plan provisions.

For their part, the machine builders maintain that there are some discrepancies between the characteristics of the equipment and the specific conditions for working in the mines. This stems from the provisions in the technical-economic production documents drawn up by the Institute of Mining Research and Design (which is also the user) and which probably did not take their initial calculations with all the necessary factors. Given that the producer units make products only in accordance with the provisions noted in the design, it appears necessary that on the order for technological equipment not to note the production design for the user solely under ideal working conditions, but to keep in mind the real and complex difficulties actually involved in pit mining and the possibilities of certain more difficult mining conditions appearing along the way.

In other cases, the use indicators for certain machines, and clearly the quantity of coal delivered, were considerably reduced because of the inappropriate service provided by the producer units for the maintenance and repair of approximately 200 cup excavators and over 400 bulldozers. And, this is so because there is a shortfall at the producer of a series of sub-assemblies that influence the proper operation of the existing equipment. Within the framework of the problem of the inappropriate maintenance of certain equipment, we must mention the I.U.T.C.C.R. enterprise which has auxiliary equipment (bulldozers, cup excavators, graders and so forth) because this unit does not always succeed in carrying out (quantitatively and qualitatively) the maintenance and repair of equipment at the level of requests. The principal causes are the lack of spare parts, personnel and repair and maintenance facilities, and the failure to rigorously respect technical and work discipline, that is, causes that can be quickly remedied.

On the other hand, it is worth noting the fact that certain service and maintenance teams from the supplier have found some shortcomings in the way the equipment is used by the user in mining and especially in the maintenance of technological equipment. We are speaking of, for example, technological conveyors for transporting extracted coal whose rubber conveyors are broken because the user does not clean the rollers and the conveyor ends where the coal is deposited and because of the continual rubbing the conveyor belt deteriorates. In this context, a more consistent concern is required for the continuing improvement of the use and maintenance of technological installations in inventory so that the use indicators are raised in a short period of time for all types of equipment, and especially those in the pits, to over 80 percent.

Regularity in the Delivery of Coal to the Thermal Power Stations

The Oltenia coal basis supplies three large thermal power stations (Rogojelu, Turceni and Isalnita). Under these conditions, it appears necessary to intensify the effort of the factors involved to provide the necessary stocks of coal to the thermal power stations so they can fully operate during the winter season. At the beginning of November this year how much was stored in the coal yards at the three thermal power stations we mentioned? Isalnita - 525,000 tons of coal, Turceni - 175,000 tons, Rogojelu - 140,000 tons. This compares to how much should be in the coal yards at the end of December of this year so that the

three great thermal power stations will be capable of meeting the demands of the eventual more difficult meteorological conditions: Isalnita - 900,000 tons, Turceni - 360,000 tons, Rogojelu - 800,000 tons. The difference is, without a doubt, great, but it must be said that at the beginning of November the combine had in its 38 storage yards no less than 2.4 million tons of extracted and stored coal. In what type of storage yards? In 10 organized yards and approximately 30 unorganized ones, which accounts for the advanced stage of deterioration of the coal stored under such precarious conditions.

How did such a paradoxal situation arise where the amount of coal needed by the user is extracted but stays at the producer? On one hand, because, as the specialists at the Oltenia Mining Combine maintain, the thermal power stations are not taking the planned amounts of coal from the producer's storage yards. For example, the Turceni Thermal Power Station is taking only 12-14,000 tons of coal per day instead of the approximate 20,000 tons per day, while the one at Rogojelu is only taking 21,000 tons per day instead of 34,000. On the other hand, because it is necessary to supplement the number of rail cars to transport the coal.

The situation must be urgently resolved since the achievements of the miners are directly proportionally evaluated with the quantity of coal delivered and the thermal power stations cannot produce with the necessary fuel. For that reason, in the joint action plan of the ministries involved (the Ministry of Mines, Petroleum and Geology, the Ministry of Electrical Energy, and the Ministry of Transportation and Telecommunications) it notes that all 28 unorganized storage yards throughout the coal combine will be eliminated by the end of the year by transferring the coal to the power stations. This is where some supplementary efforts are also needed. Because in addition to the continually rising daily production of coal, an enormous amount of coal from existing stocks must be transported by rail. It is necessary for the Ministry of the Machine Building Industry to ensure the production and delivery, this year, of at least 100 auto-unloading rail cars that will rapidly increase the transport capacity of the railroad to the power stations. One hundred rail cars this year because, according to the established schedule, another 350 rail cars needed for the traffic out of Oltenia will be delivered in the first 2 months of the next year. This is exactly how the Ministry of Technical-Material Supply and the Review of the Management of Fixed Assets will have to ensure on a priority basis the distribution of fuels, tires and spare parts for the continuing operation of the entire number of motor pool vehicles and bulldozers used in the Oltenia coal basin.

Of special importance is the study of the proposal by which the producer units of the Oltenia Mining Combine and the user power stations at Rovinari and Turceni, which are in the same industrial complex, are to be united from an organizational point of view into a single central for the extraction and use of coal, as this complex mining-energy activity is organized in other countries. The proposal deserves the full attention of the factors involved because of the significant advantages also offered by saving an important number of technical, scientific and administrative personnel that are currently involved in the separate recording of data on coal at the producer and the users.

Also to this end, there should be a more careful examination of the proposal that the basic physical indicator in evaluating the activities in the mining sector should be a certain quantity of gigacalories (and not in the current tons of coal extracted), and at the level of the combine for the extraction and use of coal the indicator kilowatt-hour of energy produced should be institutionalized.

Also for the purpose of ensuring the regularity of the extraction and delivery of production, there should be an extension of the measure to continue to build storage yards both at the supplier and the user, since the advantages are substantial if one keeps in mind that this creates conditions for the better drying of the coal and for the increased quality of the coal and its caloric content through sorting and mixing. On this basis, a buffer-stock can be created (which will have to increase greatly beyond 1.5-2 million tons) capable of providing a certain independence for the power stations from the suppliers, avoiding critical supply situations and ensuring continuity in the delivery of coal during the winter.

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